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Mitretek Technical Report

Assessment of Using Stockpile Disposal Facilities to Process Selected Non-Stockpile Chemical Materiel

Initial Screening

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Introduction

The U.S. Army Program Manager for Chemical Demilitarization (PMCD) is in the process of designing, building, and operating facilities and systems that will destroy United States chemical warfare materiel (CWM). For various reasons, including long-time requirements of federal law discussed below, PMCD has implemented the program administratively in two separate projects. One project is responsible for destroying the designated U.S. stockpile of chemical munitions stored at eight locations in the continental United States and on Johnston Island in the Pacific Ocean (called stockpile CWM). The other project is responsible for destroying all other CWM, called non-stockpile chemical materiel (NSCM). NSCM includes chemical munitions and containers of chemical agents and industrial chemicals that are not included in the designated U.S. inventory of stockpile CWM. Some of this NSCM is stored at the same locations as the stockpile CWM.

Until recently, federal law required that stockpile chemical agent disposal facilities (CDF) could be used only to destroy stockpile CWM and not for any other purpose (such as destroying NSCM). Therefore, each CDF was designed to destroy those types of munitions and containers in the stockpile at that location. No consideration was given in the CDF design to the NSCM that was also stored at the site. However, in October 1999, Congress modified federal law to remove the above prohibition if the state in which the CDF is located permits it. As a result, the Army is now studying the feasibility and cost-effectiveness of using the CDFs to destroy the NSCM that is also stored at the same location. The Army is not considering moving NSCM among CDF locations nor is consideration being given to how to destroy buried NSCM that might be exhumed in the future.

This report is the first part of a two-stage assessment and provides the results of an initial screening analysis. This initial screening considers the compatibility and other issues of using the stockpile CDFs and two other Army facilities to destroy NSCM stored at the same site. The second stage of the study will be a more detailed analysis.

Background

The U.S. chemical weapons stockpile is composed of unitary chemical munitions and bulk agent containers. This stockpile is stored at eight locations in the continental United States and on Johnston Island in the Pacific Ocean. The stockpile contains a variety of chemical munitions, such as projectiles, mortars, rockets, bombs, land mines, spray tanks, and bulk containers. The stockpile munitions and containers are filled with blister agent (e.g., HD mustard) or nerve agent (e.g., GB and VX). Figure ES-1 shows the locations of the eight stockpile sites in the continental United States and the original stockpile inventory.

PMCD is designing, constructing, and operating CDFs using a variety of technologies to dispose of the stockpile. These CDFs are scheduled for closure and dismantling after the completion of stockpile destruction activities. The Army must destroy stockpile CWM and most types of NSCM by 28 April 2007 to comply with U.S. laws and with the international treaty, *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction*, commonly referred to as the Chemical Weapons Convention (CWC).

The Army Product Manager for Non-Stockpile Chemical Materiel (PMNSCM) is responsible for destroying many types of CWM that are not part of the stockpile of chemical munitions. NSCM comprises five categories of CWM: recovered chemical weapons (chemical munitions recovered from burial sites and test and firing ranges and from research and development activities), miscellaneous CWM, binary chemical weapons, buried CWM, and former production facilities. NSCM is currently stored in nine states, the U.S. Virgin Islands, and Johnston Island. Known or suspected CWM burial sites are located in 38 states, the U.S. Virgin Islands, the District of Columbia, and Guam. The PMNSCM is currently developing a variety of transportable and other treatment systems to destroy the NSCM at each location and storage site.

Only a portion of the NSCM is being considered in this study, primarily recovered chemical munitions, chemical samples (containers of chemical agent or industrial chemicals in a wide variety of sizes from small vials to ton containers), chemical agent identification sets (CAIS), and binary chemical weapons. In addition, only NSCM that is in storage at the eight U.S. locations shown in Figure ES-1 is part of this study. In general, there is less NSCM stored at these sites than stockpile items, but NSCM consists of a greater variety of munition type, configuration, and chemical fill and may be in poorer condition than stockpile items.

Purpose

The Army has tasked Mitretek Systems of McLean, VA, to conduct this independent study to determine the technical, cost, schedule, public acceptance, and environmental permitting issues associated with processing NSCM items that are collocated at the stockpile destruction facilities. Because of their existing capabilities, two other Army facilities—the Chemical Transfer Facility (CTF) at Aberdeen Proving Ground in Maryland and the Chemical Agent Munitions Disposal Facility (CAMDS) at the Deseret Chemical Depot in Utah—will be similarly evaluated. The results of this evaluation will be compared to the technical, cost, schedule, public acceptance, permitting, and environmental issues associated with processing NSCM items in the transportable and other treatment systems that are currently being developed by the PMNSCM.

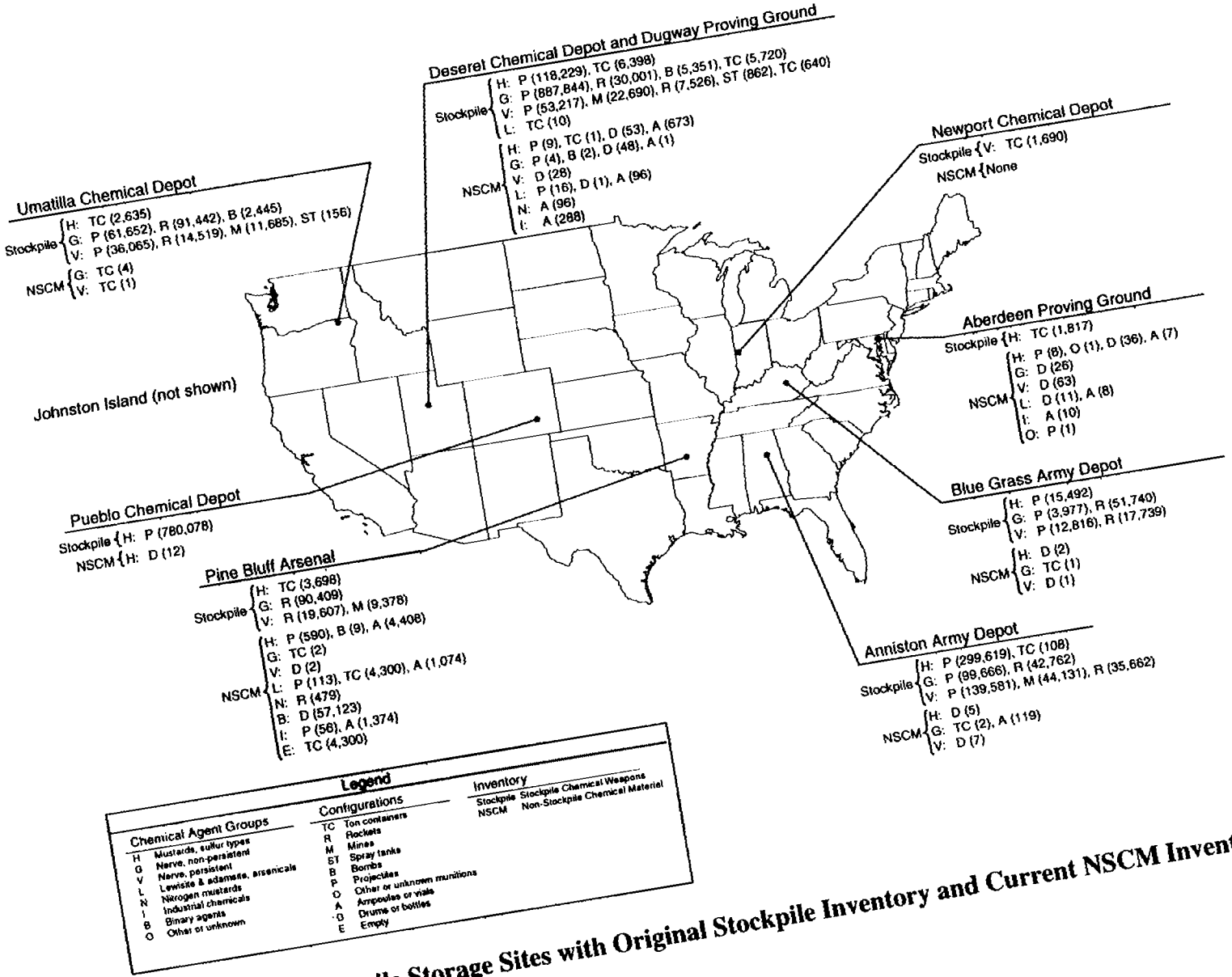


Figure ES-1. Stockpile Storage Sites with Original Stockpile Inventory and Current NSCM Inventory

Scope of Analysis

The study is being conducted in two stages (see Figure ES-2). Stage 1 involves an initial screening of the feasibility of using the CDFs and the two other Army facilities cited above to destroy NSCM stored at that location. The initial screening considers technical compatibility with the CDF and schedule compatibility with the 2007 CWC deadline, as well as an initial assessment of the political/public outlook regarding the acceptability of the Army implementing such a disposal activity. Stage 2 of the analysis will study in detail those items and facilities selected in the Stage 1 screening analysis. The detailed assessment will include technology compatibility and cost/schedule risk analyses, assess permit and environmental issues, and will continue the public acceptability analysis begun in Stage 1 of the analysis.

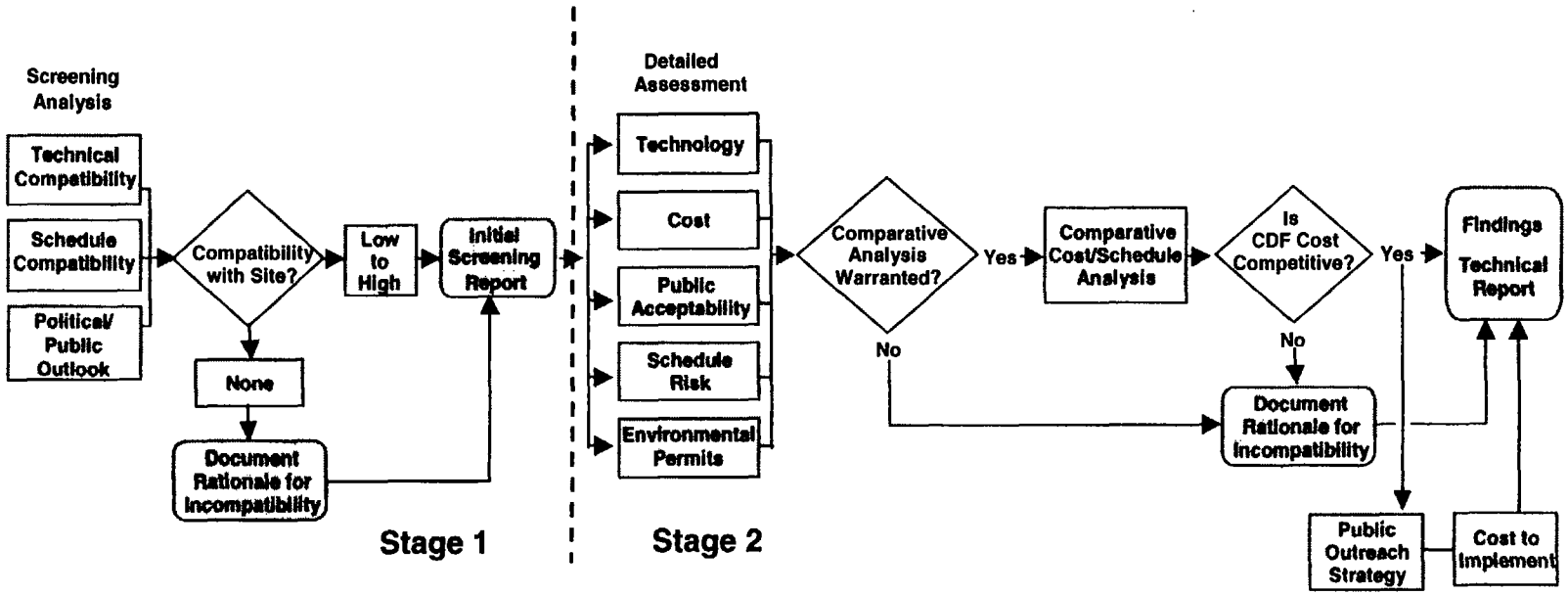
Approach

At each site, a technical compatibility rating of high, medium, low, or no/none has been assigned for each type of item in the site's current non-stockpile inventory. Technical compatibility refers to the ability of the technology and equipment present or proposed for each CDF to destroy the NSCM present at that location.

The processing of NSCM at each site has been also rated in terms of its schedule compatibility as high, medium, or low. A qualitative assessment was made as to whether the processing of each particular type of NSCM would have a significant adverse effect on the stockpile schedule or would jeopardize the completion of stockpile disposal by the 2007 CWC deadline.

To assess the political/public outlook for processing NSCM in a stockpile facility, a phone survey was conducted by calling the Public Affairs Officers (PAOs) and Outreach Coordinators (OCs)/Outreach Site Managers at the eight stockpile facility locations. Additional general information on previous Army commitments has been obtained from the PMCD Public Outreach and Information Office. Letters, news releases, editorials, and other relevant written material received by the PMCD, PAOs, and OCs on non-stockpile issues were also examined. The political/public outlook was rated as high, medium, or low.

Based on an examination of the technical compatibility, schedule compatibility, and political/public outlook ratings, an overall compatibility was determined for each type of NSCM at a stockpile facility site. The items have been qualitatively rated high, medium, low, or no/none as to their overall compatibility with the facility. All items rated high, medium, or low are recommended for further evaluation in the Stage 2 detailed assessment. These items appear to be technically compatible (to some degree) with the facility technology, their processing may not extend the stockpile operational schedule past the 2007 CWC deadline, and an initial examination of the political/public outlook indicates that processing of NSCM in the CDF may be possible. The NSCM items that are rated no/none for overall compatibility are not recommended for further evaluation in Stage 2 because of major incompatibility issues or a



CDF–Chemical Agent Disposal Facility

Figure ES-2. Study Process Flow

combination of poor ratings. It should be noted that NSCM items that were rated as having a low or medium compatibility in this initial screening study are more likely to be judged incompatible in subsequent levels of detailed analysis, but further assessment is needed to make a sound, defensible recommendation.

Screening Analysis Findings

Below are brief descriptions for the NSCM compatibility findings for each facility. They are arranged alphabetically by stockpile storage site. A summary table (Table ES-1) of these findings follows after the narrative descriptions.

Aberdeen Proving Ground, Aberdeen, Maryland

Aberdeen Proving Ground is the site for two separate facilities with the capability to destroy CWM: the Aberdeen Chemical Agent Disposal Facility (ABCDF) and the Chemical Transfer Facility (CTF).

The Aberdeen Proving Ground NSCM inventory consists of a variety of items with different agent fills. Only a few types of NSCM (non-explosive NSCM containing mustard) were determined to have some technical compatibility with the ABCDF—all other items were deemed technically incompatible and no further study was conducted. The non-explosive NSCM containing mustard were determined to have high compatibility with the ABCDF stockpile schedule. The political/public outlook forecasted some difficulties due to a community's desire to use facilities other than ABCDF for processing NSCM. It is recommended that non-explosive NSCM containing mustard continue to be assessed in the next stage of this study to determine compatibility with ABCDF.

Because of the flexibility of the CTF, the experience of its employees, and the political/public outlook, which forecasts the desire to pursue non-ABCDF solutions, most items were determined to have a rating of high overall compatibility with the CTF. With the exception of explosively configured NSCM, it is recommended that the remaining items in the APG NSCM inventory continue to be assessed in Stage 2 of this study.

Anniston Army Depot, Anniston, Alabama

The Anniston Army Depot NSCM inventory consists of containers such as bottles and vials that contain the same agents that will be processed in the Anniston Chemical Agent Disposal Facility (ANCDF). The technical compatibility analysis indicated that ANCDF would require some technology development to access and drain the agent from some of the bulk containers. The ANCDF stockpile schedule is conducive to additional operations and the items in the inventory would not significantly lengthen the stockpile schedule or jeopardize treaty compliance. The political/public outlook forecasts some difficulty in using the CDF to process NSCM because of concern that any NSCM processing could eventually lead to

bringing NSCM from other sites to be processed in the ANCDF. It is recommended that all NSCM items stored at Anniston Army Depot continue to be assessed in Stage 2 of this study.

Blue Grass Army Depot, Richmond, Kentucky

The Blue Grass Army Depot NSCM inventory consists of four non-stockpile chemical sample containers that differ from any in the stockpile, but these items contain the same types of agent as the stockpile CWM. Therefore, the NSCM can probably be handled without major difficulty regardless of the technology ultimately selected for the Blue Grass Chemical Agent Disposal Facility (BGCDF). There should be few schedule issues because of the limited number of NSCM items present. The political/public outlook for NSCM processing at BGCDF appears medium. It is recommended that all NSCM stored at Blue Grass Army Depot continue to be assessed in Stage 2 of this study.

Deseret Chemical Depot, Tooele, Utah

Deseret Chemical Depot (DCD) is the site for two separate facilities with the capability to destroy CWM: the Tooele Chemical Agent Disposal Facility (TOCDF) and the Chemical Agent Munition Disposal System (CAMDS).

In addition to the NSCM inventory at DCD, there is also a small NSCM inventory at the Dugway Proving Ground (DPG). It is assumed for this study that this NSCM could be transported to DCD for disposal.

The NSCM inventory at the DCD and the DPG is quite varied. However, all of the items have some degree of technical compatibility with TOCDF. The stockpile schedule compatibility ratings vary depending on the NSCM quantities and whether items similar to the NSCM inventory are scheduled for processing in TOCDF. The political/public outlook forecast appears medium. It is recommended that all NSCM at DCD and DPG continue to be assessed in Stage 2 of this study for processing at TOCDF. It should be noted that some NSCM with fills that are difficult to process had low overall compatibility and are more likely to be judged incompatible early in the detailed assessment process.

Because of the flexibility of CAMDS and the experience of the staff, all of the NSCM items have some degree of technical and overall compatibility. The stockpile schedule compatibility ratings are high since CAMDS is only tangentially associated with meeting the 2007 treaty deadline. The political/public outlook forecast appears medium regarding public acceptance to allow processing of locally stored material at the CAMDS. It is recommended that all NSCM at DCD and DPG continue to be assessed in Stage 2 of this study for processing at CAMDS. NSCM with difficult-to-process fill has low overall compatibility and is more likely to be judged incompatible early in the detailed assessment process.

Newport Chemical Depot, Newport, Indiana

Currently, there is no NSCM stored at Newport Chemical Depot (NECD). In the unlikely event that VX agent is found during the ongoing dismantling of the former VX production facility, it should be possible to process such NSCM in the Newport Chemical Agent Disposal Facility (NECDF). At this time, there is no need for further evaluation of NECDF.

Pine Bluff Arsenal, Pine Bluff, Arkansas

Because the Pine Bluff Arsenal NSCM is so varied, the technical compatibility ratings also vary greatly. The stockpile schedule compatibility ratings vary depending on the NSCM quantities present and on whether similar stockpile items will be processed in the Pine Bluff Chemical Agent Disposal Facility (PBCDF). The political/public outlook forecast appears low, with general support for the use of other systems such as the PMNSCM mobile systems currently under development. A rating of no compatibility was given to explosive projectiles and mortars with lewisite (L) and projectiles and mortars with phosgene (CG) (a gaseous fill) due to the difficulty in processing these fills. It is recommended that no further assessment be performed for these NSCM items. The remainder of the Pine Bluff Arsenal NSCM inventory are rated as having some overall compatibility with the PBCDF and should be assessed in Stage 2 of this study. However, many of these items—including traktor rockets, binary precursor DF, explosive projectiles of unique configuration, and CAIS with arsenicals CK and CG—are rated as having low overall compatibility. These items are more likely to be judged incompatible early in the detailed assessment process.

Pueblo Chemical Depot, Pueblo, Colorado

The Pueblo Chemical Depot NSCM inventory, which consists of bottles of mustard agent, appears to be technically compatible (to some degree) with all of the technologies being considered for Pueblo Chemical Agent Disposal Facility. In addition, schedule compatibility is low to medium, and the political/public outlook appears medium to high. It is recommended that all NSCM items stored at Pueblo Chemical Depot continue to be assessed in Stage 2 of this study.

Umatilla Chemical Depot, Hermiston, Oregon

The Umatilla Chemical Depot NSCM items (5 ton containers) could be processed in the Umatilla Chemical Agent Disposal Facility without major difficulty. In addition, the public outlook forecasts support for NSCM processing, and the schedule compatibility is high. It is recommended that all NSCM items stored at Umatilla Chemical Depot continue to be assessed in Stage 2 of this study.

Table ES-1. Overall Compatibility Ratings

Items	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Aberdeen Chemical Agent Disposal Facility—Aberdeen Proving Ground, Aberdeen, MD								
Munitions								
75mm projectile (explosive)		N						
4.2-inch mortar (explosive)		N			N			
4-inch (non-explosive)		M						
Chemical Samples								
30-gallon drum	N	M		N				
5-pint can		M		N				
5-gal bucket		M		N				
Multi-pack bottles, vials	N		N					
55-gallon drum		M						
0.5-gallon can		M		N				
Ton container	N			N				
15-gallon container	N							
DOT bottle	N							
Bottle	N							
Chem. Agent Ident. Sets (CAIS)								
K955		M	N					
K955, Chloroacetophenone (CN)								N
Adamsite (DM)								N
Chloropicrin (PS)								N
Triphosgene (TP)								N
Chemical Transfer Facility—Aberdeen Proving Ground, Aberdeen, MD								
Munitions								
75mm projectile (explosive)		N						
4.2-inch mortar (explosive)		N			N			
4-inch (non-explosive)		H						
Chemical Samples								
30-gallon drum	H	H		H				
5-pint can		H		H				
5-gallon bucket		H		H				
Multi-pack bottles, vials	H		H					
55-gallon drum		H						
0.5-gallon can		H		H				
Ton container	H			H				
15-gallon container	H							
DOT bottle	H							
Bottle	H							
Chem. Agent Ident. Sets (CAIS)								
K955		H	H					
K955, Chloroacetophenone (CN)								H
Adamsite (DM)								H
Chloropicrin (PS)								H
Triphosgene (TP)								H

H = High M = Medium L = Low N = No/None

Table ES-1. (Continued)

Items	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Anniston Chemical Agent Disposal Facility—Anniston Army Depot, Anniston, AL								
Chemical Samples								
Vial	M							
DOT bottle		M		M				
Ton Container	H							
Blue Grass Chemical Agent Disposal Facility—Blue Grass Army Depot, Richmond, KY								
Chemical Samples								
DOT bottle		M		M				
Ton container	M							
Tooele Chemical Agent Disposal Facility, Tooele, UT								
Items at Deseret Chemical Depot, Tooele, UT								
Chemical Samples								
Miscellaneous containers		M						
Ampoule	M							
Ton container		H						
Chem. Agent Ident. Sets (CAIS)								
K953, K941		M	M		L			
Cyanogen chloride (CK)								L
Ethyl malonate (GS)								M
Nitrogen Mustard (HN)								M
Items at Dugway Proving Ground, Dugway, UT								
Munitions								
4.2-inch mortar (explosive)		H	L					
105mm projectile (explosive)		H	L					
155mm projectile (explosive)	H							
T77 155mm projectile (explosive)	M							
6-inch projectile (explosive)	M							
M125 Half bomblet (explosive)	M							
155mm (non-explosive)	H							
4.2-inch (non-explosive)		H						
M139 Half bomblet (non-explosive)	M							
Chemical Samples								
Containers, bottles, vials	M	M	L	M				
Bottles (EA-1699)								M
Chemical Agent Munitions Disposal System, Tooele, UT								
Items at Deseret Chemical Depot, Tooele, UT								
Chemical Samples								
Miscellaneous containers		M						
Ampoule	M							
Ton container		M						
Chem. Agent Ident. Sets (CAIS)								
K953, K941		M	M		L			
Cyanogen chloride (CK)								L
Ethyl malonate (GS)								M
Nitrogen mustard (HN)								M
Items at Dugway Proving Ground, Dugway, UT								
Munitions								
4.2-inch mortar (explosive)		M	M					
105mm projectile (explosive)		M	M					
155mm projectile (explosive)	M							

H = High M = Medium L = Low N = No/None

Table ES-1. (Concluded)

Items	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Chemical Agent Munitions Disposal System—Dugway Proving Ground (Concluded), Dugway, UT								
Munitions (concluded)								
6-inch projectile (explosive)	M							
M125 Half bomblet (explosive)	M							
155mm (non-explosive)	M							
4.2-inch mortar (non-explosive)		M						
M139 Half bomblet (non-explosive)	M							
Chemical Samples								
Containers, bottles, vials	M	M	M	M				
Bottles (EA-1699)								M
Pine Bluff Chemical Agent Disposal Facility—Pine Bluff Arsenal, Pine Bluff, AR								
Munitions								
4.2-inch mortar (explosive)		L	N		N			
150mm traktor rocket (explosive)								L
75mm projectile (explosive)		L						
200mm Livens projectile (explosive)		L			N			
M70A1 bomb (explosives unknown)		M						
75mm projectile (non-explosive)		M						
4-inch cylinder (non-explosive)		M						
Chemical Samples								
Ton container	H							
Ton container (empty, previously L)								M
Lab sample				H				
Vial			L					
Chem. Agent Ident. Sets (CAIS)								
Mustard (H/HD/HS)		M						
Lewisite (L)			L					
Chloropicrin (PS)								M
Phosgene (CG)					L			
Chloroacetophenone (CN)								M
Adamsite (DM)								L
Triphosgene (TP)								M
Cyanogen chloride (CK)								L
Ethyl malonate (GS)								M
Nitrogen mustard (HN)								M
Binary								
M20						L		
Drum						L	M	
Box, container, can							M	
Pueblo Chemical Agent Disposal Facility—Pueblo Chemical Depot, Pueblo, CO								
Chemical Samples								
DOT Bottles		M						
Umatilla Chemical Agent Disposal Facility—Umatilla Chemical Depot, Hermiston, OR								
Chemical Samples								
Ton Container	H			H				

H = High M = Medium L = Low N = No/None

Section 1

Introduction

The U.S. Army Program Manager for Chemical Demilitarization (PMCD) is in the process of designing, building, and operating facilities and systems that will destroy United States chemical warfare materiel (CWM). For various reasons, including long-time requirements of federal law discussed below, PMCD has implemented the program administratively in two separate projects. One project is responsible for destroying the designated U.S. stockpile of chemical munitions stored at eight locations in the continental United States and on Johnston Island in the Pacific Ocean (called stockpile CWM). The other project is responsible for destroying all other CWM, called non-stockpile chemical materiel (NSCM). NSCM includes chemical munitions and containers of chemical agents and industrial chemicals that are not included in the designated U.S. inventory of stockpile CWM. Some of this NSCM is stored at the same locations as the stockpile CWM.

Until recently, federal law required that stockpile chemical agent disposal facilities (CDF) could be used only to destroy stockpile CWM and not for any other purpose (such as destroying NSCM). Therefore, each CDF was designed to destroy only those types of munitions and containers in the stockpile at that location. No consideration was given in the CDF design to the NSCM that was also stored at the site. However, in October 1999, Congress modified federal law to remove the above prohibition if the state in which the CDF is located permits it. As a result, the Army is now studying the feasibility and cost-effectiveness of using the CDFs to destroy the NSCM that is also stored at the same location. The Army is not considering moving NSCM among CDF locations nor is consideration being given to how to destroy buried NSCM that might be exhumed in the future.

This report is the first part of a two-stage assessment and provides the results of an initial screening analysis. This initial screening considers the compatibility and other issues of using the stockpile CDFs and two other Army facilities to destroy NSCM stored at the same site. The second stage of the study will be a more detailed analysis.

1.1 Background

Provided below are brief discussions of the two PMCD projects to destroy stockpile and non-stockpile CWM. Also described is the international treaty that is one of the reasons that the United States must destroy its CWM. Some additional information is provided on the recent change in legislation that has resulted in this Army study.

1.1.1 Disposal of the Chemical Munitions Stockpile

The U.S. chemical weapons stockpile is composed of unitary chemical munitions and bulk agent containers. By definition, stockpile items are generally made up of chemical agents and

munitions that have been maintained under proper storage and accounting procedures since their manufacture as part of the active arsenal of U.S. weapons. The CWM stockpile is stored at eight locations throughout the continental United States and on Johnston Island in the Pacific Ocean. The stockpile contains a variety of CWM, such as projectiles, mortars, rockets, bombs, land mines, spray tanks, and non-munition agent containers. The stockpile munitions and containers are filled with blister agent (e.g., HD mustard) or nerve agent (e.g., GB and VX). Figure 1-1 shows the location of the eight stockpile sites in the continental United States and the original number and type of stockpile items at each of these storage locations.

PMCD is designing, constructing, and operating CDFs at the eight locations shown in Figure 1-1 and on Johnston Island using a variety of technologies to dispose of the stockpile. These CDFs are scheduled for closure and dismantling after the completion of stockpile destruction activities. The Project Manager for Chemical Stockpile Disposal (PMCSD) is currently responsible for destroying the U.S. stockpile inventory at five of the nine locations: Anniston Army Depot, Alabama; Deseret Chemical Depot, Utah; Johnston Island; Pine Bluff Arsenal, Arkansas; and Umatilla Chemical Depot, Oregon. PMCSD is operating and constructing incineration-based CDFs at these five locations. The Project Manager for Alternative Technologies and Approaches (PMATA) is responsible for conducting pilot testing of destruction technologies at two stockpile locations: Aberdeen Proving Ground, Maryland, and Newport Chemical Depot, Indiana. Neutralization-based technologies will be employed at these two facilities. The type of CDF has not yet been selected at two stockpile locations: Blue Grass Army Depot, Kentucky, and Pueblo Chemical Depot, Colorado; technology selection for these two locations may include technologies being studied under the Assembled Chemical Weapons Assessment (ACWA) Program, which is a separate Army program.

1.1.2 Disposal of Non-Stockpile Chemical Materiel

The Army Product Manager for Non-Stockpile Chemical Materiel (PMNSCM) is responsible for destroying many types of CWM that are not part of the stockpile of chemical munitions. NSCM comprises five categories of CWM: recovered chemical weapons (chemical munitions recovered from burial sites, test and firing ranges, and from research and development activities), miscellaneous CWM, binary chemical weapons, buried CWM, and former production facilities. NSCM is currently stored in nine states, the U.S. Virgin Islands, and Johnston Island. Known or suspected CWM burial sites are located in 38 states, the U.S. Virgin Islands, the District of Columbia, and Guam. The PMNSCM is currently developing a variety of transportable and other treatment systems to destroy the NSCM at each location and storage site.

Only a portion of the NSCM is being considered in this study, primarily recovered chemical munitions, chemical samples (containers of chemical agent in a wide variety of sizes from small vials to ton containers), chemical agent identification sets (CAIS), and binary chemical weapons. Only NSCM that is in storage at the eight locations shown in

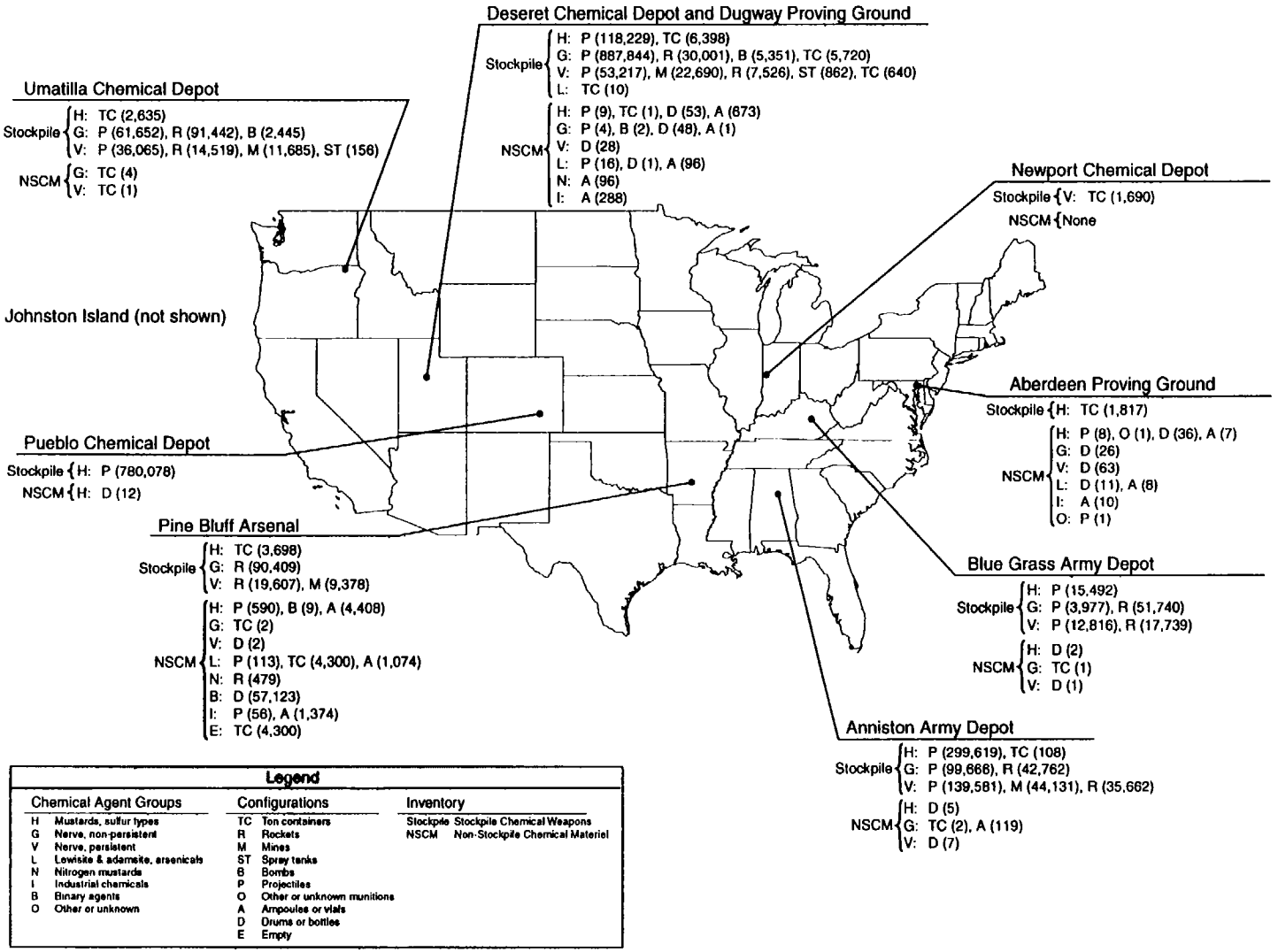


Figure 1-1. Stockpile Storage Sites with Original Stockpile Inventory and Current NSCM Inventory

Figure 1-1 is part of this study. In general, there is less NSCM stored at these sites than stockpile items, but NSCM consists of a greater variety of munition type, configuration, and chemical fill. In addition, because some NSCM have been recovered from burial sites, they may be leaking or in generally poor condition. The current inventory of NSCM in storage at each of the eight stockpile storage locations is given in Figure 1-1. Some assumptions have been made in the NSCM inventory when the exact configuration or fill is currently unknown.

1.1.3 Chemical Weapons Convention

The Army must destroy stockpile CWM and most types of stored NSCM to comply with U.S. laws and with the international treaty, *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction*, commonly referred to as the Chemical Weapons Convention (CWC). The treaty, signed by the United States on 13 January 1993, was ratified by the U.S. Congress in April 1997. The CWC specifies the milestones for destroying CWM. The CWM in the U.S. stockpile and most of the NSCM currently in storage must be destroyed by 28 April 2007.

1.1.4 Legislative Changes

PMCD has operated under a legislative provision that prohibited using the CDFs for purposes other than stockpile destruction. In October 1999, the U.S. Congress passed Public Law 106-65, which changed Section 1412 of the Department of Defense Authorization Act of 1986 (Public Law 99-145) to remove previous prohibitions on using the CDFs for other purposes under certain circumstances. Public Law 106-65 states that the prohibition from using CDFs for other purposes "shall not apply with respect to items designated by the Secretary of Defense as lethal chemical agents, munitions, or related materials after November 8, 1985, if the State in which a destruction facility is located issues the appropriate permit or permits for the destruction of such items at the facility."

Public Law 106-65 also requires the Secretary of Defense to assess the stockpile destruction program and to report to Congress on the measures that have already been taken or that are planned under existing law. The Secretary must also make recommendations regarding potential legislation that would significantly reduce program costs and help the United States meet its treaty obligations under the CWC.

Other constraints on CWM destruction activities contained in federal law have not changed. Among these constraints are prohibitions and restrictions on moving CWM items across state lines. Any movement would require coordinating with the Secretary of Health and Human Services and notifying the governor of any state through which chemical agents would be transported.

1.2 Purpose

The Army has tasked Mitretek Systems of McLean, VA to conduct this independent study to determine the technical, cost, schedule, public acceptance, permitting, and environmental issues associated with processing stored NSCM items collocated at the stockpile destruction facilities. The task also required that two other Army facilities—the Chemical Transfer Facility (CTF) at Aberdeen Proving Ground, Maryland, and the Chemical Agent Munitions Disposal Facility (CAMDS) at the Deseret Chemical Depot, Utah—be similarly evaluated. The results of this study will be compared to the technical, cost, schedule, public acceptance, and environmental permitting issues associated with processing NSCM items in the transportable treatment and other systems that are currently being developed by the PMNSCM.

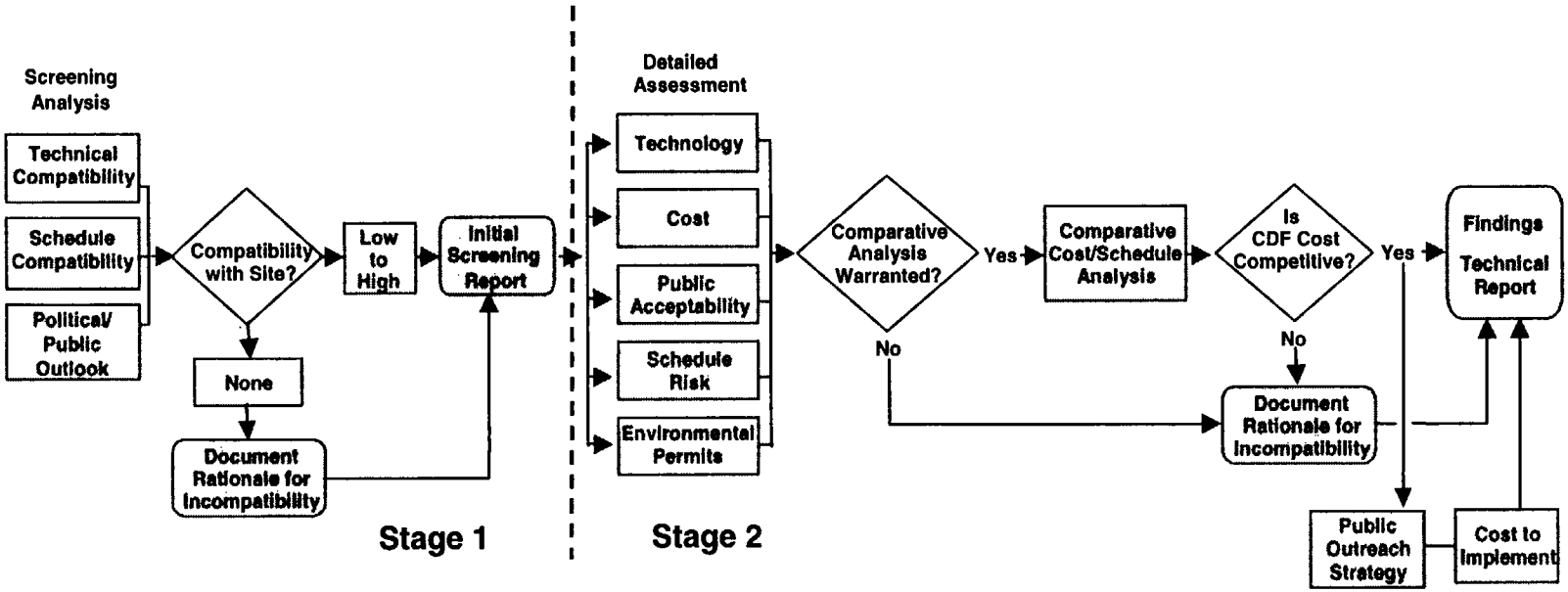
The purpose of the first stage of the study, the Initial Screening, is to identify those stockpile destruction facilities and non-stockpile items that should be studied in greater detail in the second stage of the study. The results of the first study stage are provided in this report.

1.3 Scope of Analysis

This study is being conducted in two stages (see Figure 1-2). Stage 1 involves an initial screening of the feasibility of using the CDFs and the two other Army facilities to destroy NSCM stored at that location, as well as a determination of whether each NSCM type present is compatible with the CDF. The initial screening considers technical compatibility with the CDF and schedule compatibility with the 2007 CWC deadline, as well as an initial assessment of the political/public outlook regarding the acceptability of the Army implementing such a disposal activity. The political/public outlook assessment includes a screening of previous Army commitments, public outreach efforts and resulting commitments, environmental permit application commitments, and issues of concern should the Army utilize CDFs to destroy NSCM.

Stage 2 of the analysis will involve a detailed study of those items and facilities selected in Stage 1 for further consideration. The detailed assessment will include technology compatibility and cost/schedule risk analyses, and it will continue the political/public outlook analysis begun in Stage 1. Based on the results of the detailed assessment, some NSCM will be dropped from further analysis. Other NSCM will move forward to a comparative analysis of the technical, cost, schedule, public acceptance, and environmental permitting issues associated with safely processing NSCM in the transportable treatment and other systems that are currently being developed by the PMNSCM. A final technical report will provide findings and recommendations concerning the destruction of NSCM in CDFs.

The scope of this study is limited to the NSCM inventory stored at the eight stockpile storage locations shown in Figure 1-1. Detailed inventories of NSCM located at each of these locations are provided in Sections 3.1 through 3.8.



CDF–Chemical Agent Disposal Facility

Figure 1-2. Study Process Flow

Transportation of CWM from one state to another is not being considered as part of this study (nor is the processing of unknown or unsafe items). NSCM would only be destroyed in the CDF at the location where it is stored. However, it was assumed for this study that NSCM located at Dugway Proving Ground, Utah, could be moved to the nearby Deseret Chemical Depot to be destroyed in the Tooele Chemical Agent Disposal Facility (TOCDF) or CAMDS.

This study does not address the destruction of buried NSCM that may be discovered in the future. Examination of the disposal methods for NSCM stored in locations other than at the eight stockpile disposal facilities shown in Figure 1-1 also is not within the scope of this study.

1.4 Report Contents

Section 2 provides the approach used in the Stage 1 initial screening. Section 3 presents the results of the screening arranged alphabetically by storage site. Section 4 provides the conclusions of this report. The appendices contain supporting and related information regarding Army commitments and political/public outlook.

Section 2

Approach

This section explains the approach that was used in the screening study to determine whether NSCM at a site could be processed in the site's CDF. The following sections describe the technical compatibility, schedule compatibility, and political/public outlook methodologies and a review of other non-stockpile disposal activities that were used to produce the overall compatibility ratings and recommendations.

2.1 Technical Screening

The specific CDF and associated equipment present or proposed for each of the eight CDF sites may vary by site; this is due to differences in the chemical stockpile present at each site, as well as other site-specific factors. Furthermore, the existing inventory of NSCM (munitions and containers and their fills) also varies at each chemical stockpile disposal location. This section presents the screening criteria used to rate the technical compatibility or feasibility of using the CDF to safely process the existing inventory of NSCM at that site. This section also presents a review of selected other NSCM disposal efforts that were considered in the technical compatibility screening.

2.1.1 Technical Compatibility

The following steps were used in the technical compatibility screening at each site:

- Examine the CDF's detailed process steps that are used to destroy various types of stockpile munitions.
- Review the stockpile inventory at the site.
- Review the NSCM inventory at the site.
- Determine whether various CDF processes are compatible with the NSCM or whether equipment modifications are required.
- Rate the compatibility of the CDF for each type of NSCM.

Each CDF (e.g., baseline incineration) involves a number of specific process steps (e.g., accessing and removing explosives or energetics present in a munition, accessing and draining the fill present). Some of the processes are readily adaptable to NSCM, while others may be completely unsuitable. The assessment assumes that the NSCM is in various stages of deterioration and has some level of corrosion, deformation, degradation of agent, or other defects.

The technology and equipment present or proposed for each CDF are designed to safely destroy the items present in its stockpile. However, some or all of the NSCM located at a site

differ in various and potentially significant ways from the stockpile items at the same site; for example, they may have different types of munitions, different fills, or differences in explosives/energetics. Thus, the systems and equipment may need to be modified at a site in order to process some or all of the NSCM present at that site.

Technical compatibility refers to the assessment of the amount of modification needed in order for the CDF systems and equipment at the site to process the existing NSCM inventory at the site. At each site, a technical compatibility rating is assigned for each item (munition/fill combination) in the site's NSCM inventory.

The technical compatibility ratings are assigned as follows:

- **High:** The stockpile inventory at the site contains items that are similar to the NSCM in question, or the stockpile inventory at the site does not contain this particular item in its inventory, but the facility is designed to process this item. Little or no modification is required.
- **Medium:** The particular item is not part of the stockpile inventory at the site; however, reasonable modifications to equipment and systems would make it feasible to allow processing of this item. This type of facility may be designed to process similar items.
- **Low:** The particular item is not part of the stockpile inventory at the site; significant or major modifications to equipment and systems would be needed (but appear to be possible) to allow processing of this munition or fill.
- **No/None (Not Compatible):** The NSCM is markedly different in munition type or fill from the items at the facility; use of the site technology appears to be incompatible with or not suitable for processing the item.

2.1.2 Review of Other Non-Stockpile Disposal Efforts

Previous NSCM disposal efforts in CDFs or NSCM disposal operations that had characteristics similar to the efforts being considered in this study were reviewed. The success or failure of the approach was assessed, and the outcome of the efforts was considered in this analysis. The disposal efforts considered are described below.

Between May and July 1999, the Johnston Atoll Chemical Agent Disposal System (JACADS) located on Johnson Island in the Pacific Ocean processed 109 mustard-filled 155mm M104 projectiles that were abandoned in the Solomon Islands at the end of World War II. JACADS modified their disassembly equipment and used two types of cutting devices to better access the agent in the degraded and damaged rounds; they also wrote new standing operating procedures (SOPs). With these and other operational enhancements, the campaign was completed ahead of the projected schedule (Raytheon, 2000b). In addition, between July and December 1999, JACADS processed mustard CAIS consisting of 36 K941 kits. JACADS staff again modified their equipment and worker SOPs to meet the requirements for processing

these NSCM (Raytheon, 2000a). This processing was able to take place because the previous prohibition on use of CDFs for NSCM never applied to JACADS.

Between 1999 and 2000, CAMDS at Deseret Chemical Depot, Utah, processed NSCM consisting of approximately 900 empty ton containers (TCs). The TCs were processed in the metal parts furnace (MPF).

In 1995, seven 55-gallon drums of the binary agent precursor DF were shipped from Aberdeen Proving Ground, Maryland, to a commercial, permitted facility in Illinois, where the material was incinerated. Binary precursors were never subject to the same statutory transportation constraints as unitary CWM.

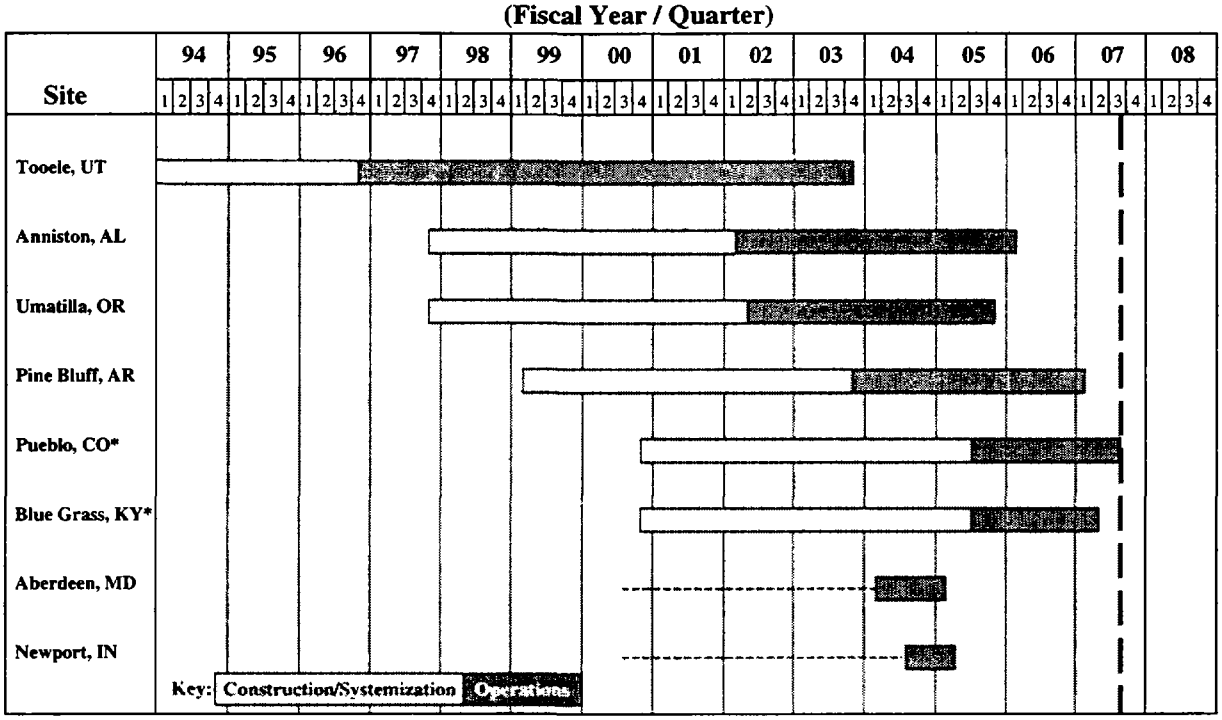
Between 1997 and 1999, Hawthorne Army Depot, Nevada fabricated a punch, drain, and transfer operation and processed approximately 241,000 canisters containing the binary precursor OPA. The OPA was shipped to a commercial, permitted facility in Utah where it was incinerated.

CAMDS, JACADS, and TOCDF have been processing leaking and "reject" munitions (e.g., projectiles and mortar rounds) for years. The equipment and procedures that are required to process leakers and rejects are very similar to what would be required for processing NSCM.

2.2 Schedule Compatibility

There are four major phases in the life cycle of a CDF: construction, systemization, operations, and closure. The Army plans to complete operations at all CDFs by the 2007 CWC deadline. The schedule for operation of the CDFs is shown in Figure 2-1. Most facilities are scheduled to complete their stockpile disposal operations a year or more before the CWC deadline. The Pine Bluff, Pueblo, and Blue Grass facilities are scheduled to complete their stockpile disposal operations less than six months before the deadline. These facilities appear to have little or no time available to perform separate campaigns to dispose of NSCM and still meet the 2007 deadline. Note that several of the sites are currently reviewing and/or revising their disposal schedules due to the reordering of scheduled munitions campaigns or because of operational or construction delays. The anticipated schedule changes should not change the results of this schedule compatibility analysis.

The processing of the NSCM at each site is rated in terms of its schedule compatibility. A qualitative assessment is made as to whether the processing of each particular type of NSCM would have a significant adverse effect on the stockpile schedule or would jeopardize the completion of stockpile disposal by the 2007 CWC deadline. It is important to note that if an item has no technical compatibility, its schedule compatibility is not rated.



* The Pueblo and Blue Grass schedules are on hold based on the FY97 Defense Appropriations Act Language.
Source: Overview of the Chemical Stockpile Disposal Project Schedules, 15 September 1999.
Note: Some of these schedules are currently being reviewed/revised.

Figure 2-1. Chemical Stockpile Disposal Schedule

The schedule compatibility ratings are assigned as follows:

- **High:** This particular NSCM could be added to a stockpile campaign of the same or similar munition or may be able to be processed concurrently during a planned stockpile campaign with little or no effect on the schedule. No affect on compliance with the treaty deadline is anticipated.
- **Medium:** The processing of this particular NSCM may affect the stockpile disposal schedule somewhat, but should not affect treaty compliance.
- **Low:** The processing of this particular NSCM may significantly affect the stockpile disposal schedule. There may be insufficient time in which to process this item in the CDF by the 2007 CWC deadline.

The evaluation and determination of schedule compatibility of the NSCM at a site has been performed independently when considering facility modifications. For example, the schedule may not allow the modification of a CDF multiple times to process different NSCM items even though individually the NSCM items are compatible. The schedule may also only allow time to select a few of the items for processing in the facility because of the 2007 CWC

deadline. These types of synergistic effects and the associated cost impact will be analyzed in Stage 2 of this study.

2.3 Assessment of Political/Public Outlook

Public acceptance and stakeholder issues (political/public outlook) associated with destroying non-stockpile CWM in CDFs were determined as described below.

2.3.1 Survey of Army Commitments and Public Acceptability Issues

A phone survey was conducted by calling the Public Affairs Officers (PAOs) and Outreach Coordinators (OCs)/Outreach Site Managers at the eight sites. Additional general information on previous Army commitments was obtained from the Chief and PMNSCM representative from the PMCD Public Outreach and Information Office. Letters, news releases, editorials, and other relevant written material received by the PMCD, PAOs, and OCs on non-stockpile issues were also examined and are included in Appendix A.

2.3.2 Commitments

The programmatic environmental impact statement process for the stockpile program and the continuing public outreach program both involve ongoing dialogue with the public at each of the stockpile sites. These programs have repeatedly emphasized (verbally and in writing) the salient provisions of Public Laws 99-145 and 103-337; the Army has also noted to the public that Congress could modify these provisions, as was subsequently done in the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65). The pertinent passages are provided below:

- "Facilities constructed to carry out this section [the requirement to safely destroy the existing U.S. stockpile of lethal chemical agents and munitions] may not be used for any purpose other than the destruction of lethal chemical weapons and munitions, and when no longer needed to carry out this section, such facilities shall be cleaned, dismantled, and disposed of in accordance with applicable laws and regulations" (50 USC 1521c). [Note: Congress modified this provision in PL 106-65, which declares that NSCM could be disposed of in CDFs if the state in which the CDF is located issues the appropriate permit(s)—see Section 1.1.4 above].
- "The Secretary of Defense may not transport any chemical munitions that constitutes part of the chemical weapons stockpile out of the State in which that munitions is located...and...may not transport any such munitions into a State." (50 USC 1512a)

Appendix B contains an Army statement concerning these provisions and the prohibitions regarding the use of the stockpile facilities and the movement of chemical munitions. The example provided is a copy of a PMCD Legislative Overview fact sheet that is available to the public at each stockpile site. This fact sheet explains the provisions cited above and other

Public Law provisions that have a direct effect on the Army's Chemical Stockpile Disposal Program. It should be noted that the public is not generally aware of the distinction between stockpile and NSCM and does not generally distinguish between them when chemical munitions are being discussed, especially with regard to prohibitions on the movement of chemical munitions. The public at each of the stockpile sites was also concerned about the possibility of NSCM being brought in from offsite for disposal in the stockpile facility. This is not the Army's intent. It was also evident that every CDF would require some level of operating permit modification to allow processing of NSCM.

2.3.3 Political/Public Outlook Ratings

Political/public outlook ratings were assigned to each stockpile facility being examined and were assumed to be the same for all NSCM in storage at the site. Note: if an NSCM item has no technical compatibility, it was not rated. The ratings are as follows:

- **High:** The processing of NSCM using the stockpile facility (and its technology) appears to be acceptable or preferred by local government officials and citizens groups.
- **Medium:** At this time, there is disagreement, uncertainty, or a lack of knowledge amongst stakeholders concerning the processing of NSCM in the stockpile facility.
- **Low:** It is less likely that the processing of NSCM in the stockpile facility would be acceptable or preferred by local government officials and citizens groups. The permit modification procedure may be difficult.

2.4 Determination of Overall Compatibility

Based on an examination of the technical compatibility, schedule compatibility, and political/public outlook ratings, an overall compatibility is determined for each type of NSCM at a stockpile facility site. The overall compatibility of the NSCM items with the facility is qualitatively rated high, medium, low, or no/none. All NSCM items that are rated high, medium, or low are recommended for further evaluation in the Stage 2 detailed assessment. These items (1) appear to be technically compatible (to some degree) with the facility technology, (2) their processing should not extend the stockpile operational schedule past the 2007 CWC deadline, and (3) an initial examination of the political/public outlook indicates that processing of NSCM in the CDF may be possible. The NSCM items that are rated no/none for overall compatibility are not recommended for further evaluation in Stage 2 because of major incompatibility issues or a combination of poor ratings.

The overall compatibility ratings are assigned as follows:

- **High:** Considering the technical compatibility, schedule compatibility, and the political/public outlook, the feasibility of using a CDF to process specific NSCM has low risk given the known capabilities and barriers.

- **Medium:** Considering the technical compatibility, schedule compatibility, and the political/public outlook, the feasibility of using a CDF to process specific NSCM has medium risk given the known capabilities and barriers.
- **Low:** Considering the technical compatibility, schedule compatibility, and the political/public outlook, the feasibility of using a CDF to process specific NSCM has high risk given the known capabilities and barriers.
- **No/None (Not Compatible):** Considering the technical compatibility, schedule compatibility, and the political/public outlook, it is not feasible to use a CDF to process specific NSCM.

Overall compatibility was generally determined considering the NSCM and CDF in isolation from other factors. The existence of other disposal options that may be preferred for technical, schedule, public, or cost reasons was not considered in this screening study. The Stage 2 analysis may eliminate some of the items (e.g., specific items rated low in terms of overall compatibility) from consideration with quick analyses of the critical technical, schedule, political/public outlook issues noted or a quick determination of cost. Some specific NSCM may require detailed cost-benefit analyses comparing the stockpile disposal with non-stockpile disposal options before a final recommendation can be made.

Section 3

Screening Analysis of Processing Non-Stockpile Items in Stockpile Facilities

3.1 Aberdeen Proving Ground, Aberdeen, Maryland

3.1.1 Chemical Disposal Facility and Inventory Descriptions

Aberdeen Proving Ground (APG) is the site for two separate facilities for destroying CWM. The first, now under construction, is the Aberdeen Chemical Agent Disposal Facility (ABCDF). ABCDF will use neutralization followed by biodegradation to destroy the APG stockpile. The second facility, the Chemical Transfer Facility (CTF), is a research and development facility that uses small quantities of agent in chemical defense research and development. The CTF houses a Chemical Agent Transfer System (CHATS) that is capable of draining bulk containers, as well as a neutralization reactor. The CTF will also be able to handle explosive munitions in the future when it implements a Munitions Assessment and Processing System (MAPS) in Fiscal Year 2004.

The stockpile inventory at APG consists of only bulk TCs that contain mustard. The NSCM inventory is shown in Table 3-1.

Beginning in 2001, the Army plans to build a Prototype Detonation Test and Destruction Facility (PDTDF) and test it along with an Explosive Destruction System (EDS) at Aberdeen. This testing could consume explosive NSCM items stored at APG.

3.1.2 Technical Compatibility Analysis: ABCDF

ABCDF is designed to process only one type of CWM: TCs containing mustard. The facility will not be equipped to handle explosives or weaponized CWM.

Explosively Configured NSCM—75mm projectiles and 4.2-inch mortars.
Rating: No/None. ABCDF has no capability for handling explosive items. There are no explosion containment facilities or equipment, and modifications are not considered feasible.

Non-Explosive NSCM (Mustard)—Chemical samples & 4-inch munition.
Rating: >15 gallon, High; ≤15 gallon, Medium. Since APG houses mustard items, ABCDF is designed to process that agent. ABCDF can process the larger chemical samples (>15 gallon) using the punch-and-drain station with only minor equipment and handling modifications. Smaller containers (≤15 gallon) and munitions may not be compatible with the TC punch-and-drain system. If not, they would require an alternate means to access the agent and manual draining and transfer to larger containers.

Table 3-1. Aberdeen Proving Ground NSCM Inventory

Non-Stockpile Inventory										
	Agent									
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	Total
Munitions										**11**
75mm projectile (explosive)		6								6
4.2-inch mortar (explosive)		1			1					2
4-inch (non-explosive)		1							1	2
To be determined (non-explosive)		1								1
Chemical Samples										**136**
30-gallon drum	14	10		9						33
5-pint can		7		25						32
5-gallon bucket		5		20						25
Multi-pack bottles, vials	6		11							17
55-gallon drum		11								11
0.5-gallon can		2		7						9
Ton container	3			2						5
15-gallon container	1									1
DOT bottle	1									1
Bottle	1									1
TBD		1								1
Chem. Agent Ident. Sets (CAIS)										**25**
K955		7	4							11
K955, Chloroacetophenone (CN)								4		4
Adamsite (DM)								4		4
Chloropicrin (PS)								4		4
Triphosgene (TP)								2		2
Total	**26**	**52**	**15**	**63**	**1**			**14**	**1**	**172**

Non-Explosive NSCM (G, L, VX)—Chemical samples. Rating: No/None. There is no G, L, or VX in the APG stockpile. ABCDF was designed for hot water neutralization of mustard agent with subsequent biological treatment of the neutralent. Neutralization of nerve agents (GA, GB, and VX) requires caustic neutralization, and neutralization of L requires hydrogen peroxide and caustic. The hot-water neutralization system may not be compatible with these reagents and the resulting products, and it may require extensive equipment modifications. In addition, testing has shown that biotreatment cannot destroy the nerve agent neutralents. The L neutralent contains arsenic compounds that are of environmental concern and which are also toxic to the biological organisms in the biotreatment plant. As previously noted, smaller containers would require an alternate means of accessing (probably minor equipment modifications and additional manual operations).

CAIS (Mustard) Rating: Medium; (Industrial Chemicals) Rating: No/None. These items could be processed similar to other small containers as described above under Non-Explosive NSCM (Mustard). ABCDF can neutralize/biotreat the mustard CAIS, but may not successfully treat the industrial chemicals in CAIS. Reagent and equipment modifications would be necessary, and it is unknown if the neutralent would be compatible with biotreatment.

3.1.3 Technical Compatibility Analysis: CTF

The CTF has processed a variety of non-explosive NSCM, including munitions, sample bottles, and TCs containing various chemical agents and industrial chemicals. The NSCM items are evaluated for technical compatibility with the current CTF capability.

Explosive NSCM—75mm projectiles and 4.2-inch mortars. Rating: No/None. The CTF has no capability for handling explosive items. There are no explosion containment facilities or equipment, and modifications are not considered feasible.

Non-Explosive NSCM (Mustard)—Chemical samples & 4-inch munition. Rating: High. The CTF is capable of processing small and large bulk items and non-explosive munitions with a variety of chemical fills. Processing involves more manual operations than ABCDF and uses smaller equipment and facilities such as the CHATS for accessing and the neutralization reactor to achieve agent destruction. The drained containers could then be decontaminated and steam sparged in the CHATS. Metal containers could be decontaminated and recycled in a smelting operation.

Non-Explosive NSCM (G, L, VX)—Chemical samples. Rating: High. The CTF is capable of handling these items as discussed above for Non-Explosive NSCM (Mustard).

CAIS (Mustard). Rating: High. These items could be processed in a manner similar to the small bottles containing mustard, as described above under Non-Explosive NSCM (Mustard).

CAIS (Industrial Chemicals). Rating: High. The CTF is capable of handling and processing NSCM containing industrial chemicals, including CG. These chemicals are processed in a manner similar to that described for mustard above.

3.1.4 Stockpile Schedule Compatibility

ABCDF Rating: High. The ABCDF schedule indicates that the facility will complete the processing of its stockpile inventory before the end of 2006. Use of ABCDF to process the relatively small quantity of NSCM items containing mustard that are stored at APG should not impact the schedule.

CTF Rating: High. The CTF is not a stockpile disposal facility and therefore has no mission driven by the 2007 CWC deadline. However, CTF operations are affected by priorities assigned to various jobs. Thus, demilitarization of NSCM at the CTF would have to be given a priority consistent with completion by 2007.

3.1.5 Political/Public Outlook

ABCDF Rating: Low/Medium

CTF Rating: High

Information pertaining to APG was obtained from the PAO and the Public Outreach Specialist. In addition, one letter was received in response to the Army's 1 June 2000

announcement of the initiation of the feasibility study (see Appendix A); this letter is from the Chairman of the Maryland Chemical Demilitarization CAC.

Commitments. The ABCDF facility is designed for disposal of chemical samples using neutralization. As discussed in the PMNSCM general commitments section (Section 2.4), the Army has made the commitment that only these stockpile items would be destroyed in the facility and that the facility would be dismantled when the stockpile was destroyed. Furthermore, the public has been told that the facility is not set up to handle items with explosives.

Public Acceptability. There has been no comment from state officials and regulators on the subject of disposing of non-stockpile items at ABCDF. The state regulators were instrumental in getting the existing permit for the facility granted in a timely manner.

In a letter to the Army, the CAC indicates that it is very much opposed to using the facility for NSCM disposal and wants to see the facility destroyed when its stated mission is completed. The CAC is very concerned about the possibility of the facility being used for NSCM from outside of Aberdeen. However, the CAC does support using the MAPS at the CTF for NSCM already at Aberdeen and indicates that Aberdeen's non-stockpile problem is thus being addressed through the MAPS. The letter stated, "This Commission has been repeatedly told...that the Aberdeen facility will be used only to destroy the stockpile of ton containers of mustard stored at APG." The CAC is very concerned that the Army will use the facility to process CWM from other sites.

With regard to the local community, the perception is that they want to see all CWM at APG disposed of as quickly as possible. It is believed that the public would generally be open to the idea of using ABCDF to dispose of the existing inventory of NSCM. In the past, the Public Outreach Office has received many comments about using the facility to its fullest potential from a cost perspective, such as for some non-chemical functions in the future. However, while a portion of the public wants to see the facility used to its fullest potential, they definitely do not want it to become a regional facility or have any chemical items brought in from out of state.

Based on the above, the political/public outlook is rated as being low to medium for using ABCDF to dispose of any portion of the existing inventory of NSCM. While the CAC is opposed to the proposed action, some of their concern is based on a fear that the Army may bring in NSCM from off site, which is not the Army's intent. On the other hand, the general public appears open to exploring any ideas that will eliminate all chemical items from the facility as quickly as possible. The use of the CTF appears to be preferred, thus the political/public outlook for using the CTF is rated as high.

3.1.6 Determination of Overall Compatibility

3.1.6.1 ABCDF Overall Compatibility

Table 3-2 summarizes the findings of this initial screening with respect to using ABCDF for demilitarization of NSCM currently stored at APG. Because (1) ABCDF is not equipped to handle explosives, (2) mustard is the only agent in the APG stockpile, and (3) the political/public outlook forecasted possible difficulties, only non-explosive NSCM containing mustard were determined to have some compatibility with ABCDF. It is recommended that those items continue to be assessed in Stage 2 of this study to determine compatibility with ABCDF.

3.1.6.2 CTF Overall Compatibility

Table 3-3 summarizes the findings of this initial screening with respect to using the CTF for demilitarization of NSCM items currently stored at APG. Because of the facility's flexibility, experience of the work force, and the political/public outlook forecasting a desire to pursue non-ABCDF solutions, several items were determined to have a rating of high overall compatibility with the CTF. With the exception of explosively configured NSCM, it is recommended that the remaining items in APG's NSCM inventory continue to be assessed in Stage 2 of this study to determine compatibility with CTF.

Table 3-2. ABCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Munitions								
75mm projectile (explosive)		**N** (N,-,-)						
4.2-inch mortar (explosive)		**N** (N,-,-)			**N** (N,-,-)			
4-inch (non-explosive)		**M** (M,H,L/M)						
Chemical Samples								
30-gallon drum	**N** (N,-,-)	**M** (H,H,L/M)		**N** (N,-,-)				
5-pint can		**M** (M,H,L/M)		**N** (N,-,-)				
5-gallon bucket		**M** (M,H,L/M)		**N** (N,-,-)				
Multi-pack bottles, vials	**N** (N,-,-)		**N** (N,-,-)					
55-gallon drum		**M** (H,H,L/M)						
0.5-gallon can		**M** (M,H,L/M)		**N** (N,-,-)				
Ton container	**N** (N,-,-)			**N** (N,-,-)				
15-gallon container	**N** (N,-,-)							
DOT bottle	**N** (N,-,-)							
Bottle	**N** (N,-,-)							
Chem. Agent Ident. Sets (CAIS)								
K955		**M** (M,H,L/M)	**N** (N,-,-)					
K955, Chloroacetophenone (CN)								**N** (N,-,-)
Adamsite (DM)								**N** (N,-,-)
Chloropicrin (PS)								**N** (N,-,-)
Triphosgene (TP)								**N** (N,-,-)
H = High, M = Medium, L = Low, N = No/None, "-" = Not Applicable Overall rating appears first in bold followed by the three area ratings								

Table 3-3. CTF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Munitions								
75mm projectile (explosive)		**N** (N,-,-)						
4.2-inch mortar (explosive)		**N** (N,-,-)			**N** (N,-,-)			
4-inch (non-explosive)		**H** (H,H,H)						
TBD (non-explosive)[a]								
Chemical Samples								
30-gallon drum	**H** (H,H,H)	**H** (H,H,H)		**H** (H,H,H)				
5-pint can		**H** (H,H,H)		**H** (H,H,H)				
5-gallon bucket		**H** (H,H,H)		**H** (H,H,H)				
Multi-pack bottles, vials	**H** (H,H,H)		**H** (H,H,H)					
55-gallon drum		**H** (H,H,H)						
0.5-gallon can		**H** (H,H,H)		**H** (H,H,H)				
Ton container	**H** (H,H,H)			**H** (H,H,H)				
15-gallon container	**H** (H,H,H)							
DOT bottle	**H** (H,H,H)							
Bottle	**H** (H,H,H)							
TBD[b]								
Chem. Agent Ident. Sets (CAIS)								
K955		**H** (H,H,H)	**H** (H,H,H)					
K955, Chloroacetophenone (CN)								**H** (H,H,H)
Adamsite (DM)								**H** (H,H,H)
Chloropicrin (PS)								**H** (H,H,H)
Triphosgene (TP)								**H** (H,H,H)

H = High, M = Medium, L = Low, N = No/None, "-" = Not Applicable
Overall rating appears first in bold followed by the three area ratings.

[a] Not rated because munition type is unknown.

[b] Not rated because container type and agent fill are unknown.

3.2 Anniston Chemical Activity, Anniston, Alabama

3.2.1 Chemical Agent Disposal Facility Description and Inventories

The Anniston Chemical Agent Disposal Facility (ANCDF) is currently under construction. The facility will use baseline reverse assembly followed by incineration to dispose of the site's CWM stockpile.

The Anniston Army Depot (ANAD) stockpile consists of explosively configured projectiles, mines, and rockets, as well as TCs containing HD, GB, or VX agents. The NSCM inventory is shown in Table 3-4.

3.2.2 Technical Compatibility Analysis

ANCDF is designed to process a full complement of the different types of munitions and agent in the stockpile. The items in the NSCM inventory at ANAD contain the same agents that will be processed at ANCDF. The ability of ANCDF to process these NSCM items will depend on its container handling and agent access capabilities.

Non-Explosive NSCM (GB)—TCs. Rating: High. The ANAD stockpile inventory contains mustard TCs; therefore ANCDF can process TCs. ANCDF will also be processing GB rockets and projectiles. Thus, it would be feasible for ANCDF to process GB TCs.

Vials (GB). Rating: Medium. ANCDF can process GB, but special accessing equipment may be required to breach the vials. Otherwise, the vials could be fed directly to the deactivation furnace system (DFS) or the MPF without accessing. If accessing is required, they could be crushed as demonstrated at JACADS for CAIS (Raytheon, 2000a).

DOT Bottles (VX, H). Rating: Medium. The ANAD stockpile inventory contains various items with VX and H, but not Department of Transportation (DOT) bottles. ANCDF can process VX and H, but a means to access the contents of the DOT bottles is needed. The bulk drain station would need tooling modifications, or a method of perforating the bottle would be necessary. Agent could be transferred to the liquid incinerator (LIC), or the full bottle could be processed through the MPF.

Table 3-4. Anniston Army Depot NSCM Inventory

Non-Stockpile Inventory										
	Agent									
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	Total
Chemical Samples										
Vial	119									119
DOT bottle		5		7						12
Ton Container	2									2
Total	**121**	**5**		**7**						**133**

3.2.3 Stockpile Destruction Schedule Compatibility

Rating: High. ANCDF schedule indicates that the facility will complete processing of its stockpile inventory before the end of calendar year 2005. The TCs could be concurrently processed (coprocessed) with stockpile GB rockets with no effect on the schedule. Other items could be processed during or after each corresponding agent campaign or following the completion of the stockpile destruction. Processing of the relatively small quantity of NSCM items currently stored at ANAD should not significantly impact the schedule.

3.2.4 Political/Public Outlook

Rating: Low

Information pertaining to Anniston was obtained from the ANCDF Demil PAO and the Outreach Site Manager. Information was also obtained from several items in the local papers (see Appendix A).

Commitments. The Army has repeatedly indicated to the Anniston community that the incineration facility would be built, tested, operated, and then closed by 2006, after 44 months of operation. The permit issued by the Alabama Department of Environmental Management (ADEM) for ANCDF has a number of specific commitments for the facility: (1) the permit lists the number of items in the stockpile inventory as the number of items that will be disposed of at the facility, (2) once the stockpile inventory is destroyed, the equipment will be removed, the furnaces destroyed, the facility decontaminated, and the decontaminated building shells left in place, and (3) the facility cannot be used as a commercial incinerator. A challenge to the issuance of the permit was unanimously rejected by the full Alabama Environmental Management Commission in June 2000. The challengers have subsequently filed a notice of appeal of the Commission's decision on 20 July 2000 in State Circuit Court.

Public Acceptability. Some state officials have gone on record about the disposal of stockpile CWM and NSCM at ANCDF. Legislation introduced by State Representative Barbara Boyd and signed by the governor mandates that once the facility has disposed of the specified number of items in the declared stockpile inventory, the facility will be closed. As a result, the state law and the permit would both have to be modified to destroy NSCM at ANCDF. Alabama Congressman Bob Riley (a member of the House Armed Services Committee that initiated the legislation allowing NSCM to be destroyed in stockpile facilities) has indicated that he would oppose any effort by the Army to burn NSCM at ANCDF. He has gone on record stating that "It is not what the community was promised ... I will fight any attempt to burn anything but the depot's stockpile out there" (*Anniston Star News*, 5 June 2000). Also, according to the *Anniston Star*, Representative Riley indicated that he approved the legislation not for ANCDF but for other incinerator communities that are interested in extending the lives of their incinerators by burning NSCM.

Both the ANCDF Demil PAO and the Outreach Site Manager indicated that there is a great deal of public concern in the community about what activities the feasibility study might usher in (see Appendix A). The public is very concerned that any use of the facility for NSCM could open the door to the Army eventually bringing in CWM both from off site within the state and from outside the state. Support for using the facility for the existing NSCM would also depend upon how this action would affect the schedule and closure of the facility. There is also local concern that since the Blue Grass facility in Kentucky has not yet been built and has a smaller stockpile than Anniston's, the Blue Grass stockpile could yet be moved to Anniston for disposal.

Several citizens have come to the Outreach Office since the Army's announcement of this feasibility study and indicated concerns about the Army changing its position with regard to what they were promised. That is, some of the public incorrectly believes that this study includes evaluating the processing of CWM from off-site.

Based on the above, the political/public outlook is rated low for using ANCDF to dispose of any of the existing inventory of NSCM. There appears to be considerable opposition to the idea from the public, state officials, and the local press.

3.2.5 Determination of Overall Compatibility

Table 3-5 summarizes the findings of this initial screening with respect to using ANCDF for demilitarization of NSCM currently stored at the ANAD. Despite a political/public outlook that forecasts potential difficulties, all of the NSCM in the ANAD inventory have some overall compatibility with ANCDF. The ANCDF stockpile schedule is conducive to additional operations and the items in the inventory are not complicated to process. Some technology development effort may be required to access and drain the agent from some of these items and to decontaminate the containers. It is recommended that all the NSCM items at the ANAD continue to be assessed in Stage 2 of this study.

Table 3-5. ANCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Chemical Samples								
Vial	**M** (M,H,L)							
DOT bottle		**M** (M,H,L)		**M** (M,H,L)				
Ton Container	**H** (H,H,L)							
H = High, M = Medium, L = Low, N = No/None Overall rating appears first in bold followed by the three area ratings								

3.3 Blue Grass Army Depot, Richmond, Kentucky

3.3.1 Chemical Agent Disposal Facility Description and Inventories

The treatment technology for the Blue Grass Chemical Agent Disposal Facility (BGCDF) has not yet been determined. This study assumes that the facility will use either reverse assembly followed by incineration, like most other stockpile facilities, or will use a process that incorporates cryofracture, neutralization, and supercritical water oxidation (Cryo/Neut/SCWO), similar in agent-destruction technology to the Neutralization/SCWO facility under construction at Newport Chemical Depot (NECD).

The Blue Grass Army Depot (BGAD) stockpile inventory consists of explosively configured rockets and projectiles containing HD, GB, or VX. The NSCM inventory is shown in Table 3-6.

3.3.2 Technical Compatibility Analysis

BGCDF will be capable of disposing of projectiles with mustard and GB and 115mm M55 rockets with GB and VX. Since this stockpile does not contain bulk containers, it is likely that the disposal facility might not include equipment needed to process them. The technical compatibility of BGCDF disposal is addressed for each type of NSCM in greater detail below.

Non-Explosive NSCM (GB)—TC. Rating: Medium. BGCDF will process GB, but it is not being designed for processing large bulk containers (regardless of whether the Baseline Incineration or ACWA Cryo/Neut/SCWO is selected). Therefore, special accessing (draining), handling, and transport equipment and operations would be required. TCs are too large for the ACWA Cryo/Neut/SCWO process, so simple TC draining and more complex decontamination equipment and operations would be required. For the Baseline Incineration process, special accessing and draining would need to be performed with decontamination in the MPF. Alternatively, the TC could be accessed and the full TC processed in the MPF under a special thermal cycle.

Table 3-6. Blue Grass Army Depot NSCM Inventory

Non-Stockpile Inventory										
	Agent									
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	Total
Chemical Samples										
DOT bottle		2		1						3
Ton container	1									1
Total	**1**	**2**		**1**						**4**

DOT Bottles (H, VX). Rating: Medium. BGCDF will process munitions with mustard and VX and could process DOT bottles in a manner similar to, but easier than, the TCs discussed above. DOT bottles can be processed by the ACWA Cryo/Neut/SCWO similar to a projectile. Baseline incineration would require minor modification to accessing (drilling) and handling equipment and operations.

3.3.3 Stockpile Destruction Schedule Compatibility

Rating: Medium. The BGAD schedule indicates the stockpile will be destroyed only about three months before the treaty deadline. The processing of the four non-stockpile items could be accomplished during or after an existing agent campaign or in the three months period after stockpile destruction.

3.3.4 Political/Public Outlook

Rating: Medium

Information pertaining to Blue Grass was obtained from the PAO, the Depot Office Engineer, and the Outreach Office Site Manager. In addition, two letters have been received in response to the Army's 1 June 2000 announcement of the initiation of the feasibility study. Information was also obtained from an item in the local paper (see Appendix A).

Commitments. As discussed in the PMNSCM general commitments section (Section 2.4), the public has been told that BGCDF will be used to dispose of stockpile CWM only and that the facility will be destroyed when the stockpile is gone.

Public Acceptability. State officials and regulators are open to discussing the benefits and disadvantages of disposing of NSCM in the chemical disposal facility versus a mobile disposal system. Up to this time, state officials have not focused on the NSCM at BGAD and do not have sufficient information to compare permitting requirements for either method. Kentucky Revised Statute 224.50-130 (recently revised) requires the Natural Resources and Environmental Protection Cabinet to find, prior to issuing a permit, that no alternative method of treatment or disposal exists that would create less risk of release, or acute or chronic health effects, or adverse environmental effect. Thus, the Cabinet would probably want to compare mobile disposal systems with using the BGCDF for NSCM as long as that is a legal and viable option.

In response to the Army's announcement of the feasibility study, the mayor of Berea, Kentucky, gave his personal view, "It is time to stop the studies and the rhetoric and get down to the business that must be taken care of, namely, destroy these rockets!" He advocated the destruction of the stockpile rockets by incineration but did not specifically address NSCM (see Appendix A).

Craig Williams of the Chemical Weapons Working Group is quoted in a local paper (*Richmond Register,* 10 June 2000) as saying that with the feasibility study "Congress clearly

has broken faith with the communities that store these chemical weapons... The deal was these [destruction plants] are to be built, the stockpile disposed of, and these things to be torn down...That insurance policy has now been voided."

With regard to the local community, the perception is that the public does not appear to distinguish between stockpile CWM and NSCM, nor does it seem very concerned about NSCM. At the Citizens' Advisory Commission (CAC), the subject of NSCM has not been and probably will not become an important topic because their primary focus has been on incineration issues.

The general public and state officials appear open to the idea of discussing the processing of NSCM at BGCDF. There is some opposition that appears to be based on concerns that the Army may bring in NSCM from off site, which is not the Army's intent (for example, see item in local press in Appendix A). Based on the above, the political/public outlook is rated medium for using BGCDF to dispose of the existing inventory of NSCM at the BGAD.

3.3.5 Determination of Overall Compatibility

Table 3-7 summarizes the findings of this initial screening with respect to using BGCDF for demilitarization of NSCM currently stored at the BGAD. The four non-stockpile bulk items at BGAD are containers that differ from any in the stockpile, but they contain the same types of agent and probably can be handled without major difficulty regardless of the technology selected. In addition, the political/public outlook forecasts a willingness to discuss NSCM processing. It is recommended that all the NSCM items at the BGAD continue to be assessed in Stage 2 of this study to verify compatibility with BGCDF.

Table 3-7. BGCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Chemical Samples								
DOT bottle		**M** (M,M,M)		**M** (M,M,M)				
Ton container	**M** (M,M,M)							

H = High, M = Medium, L = Low, N = No/None
Overall rating appears first in bold followed by the three area ratings

3.4 Deseret Chemical Depot, Tooele, Utah

3.4.1 Chemical Agent Disposal Facility Description and Inventories

The Deseret Chemical Depot (DCD) is the site for two separate facilities with the capability to destroy CWM. The first, the Tooele Chemical Disposal Facility (TOCDF), began processing the CWM stockpile stored at the DCD in 1996 using a "baseline" process of reverse assembly followed by incineration. The second, the Chemical Agent Munitions Disposal System (CAMDS), is an R&D facility that has been used to test new methods of CWM destruction since the 1970s, including reverse assembly, cryofracture, rocket shearing, and incineration. As an R&D facility, CAMDS is often retooled and modified to experiment with new methods for CWM disposal. CAMDS can undertake specialized demilitarization projects for relatively small quantities of materiel and also support engineering testing of special equipment to process problem materiel.

The DCD stockpile inventory consists of a wide variety of explosively configured projectiles, mortars, rockets, and land mines, as well as non-explosive projectiles and bulk containers (bombs, spray tanks, and TCs) containing mustard, GB, GA, VX, or L. The DCD NSCM inventory consists of a few bulk containers and a number of CAIS containing H, L, CG, or G. The inventory of CAIS items at DCD may be consumed by the year 2001 during testing of the PMNSCM mobile Rapid Response System (RRS) located at DCD.

There is also a small NSCM inventory stored at Dugway Proving Ground (DPG) in Utah, consisting of cartridges, projectiles, bomblets, and DOT containers containing H, G, VX, or L. It is assumed for this study that this NSCM could be transported to DCD for disposal. It should be noted that the complete inventory at DPG might be consumed during testing of PMNSCM mobile treatment systems during 2001. Table 3-8 contains a detailed inventory of the DCD and DPG NSCM.

3.4.2 TOCDF Technical Compatibility Analysis

TOCDF can process every type of stockpile CWM. The NSCM inventory includes some items identical or similar to stockpile items. The feasibility of TOCDF disposal of NSCM stored at DCD and DPG varies and is addressed below.

Explosive NSCM (H, GB)—105mm and 155mm projectiles and 4.2-inch mortars. Rating: High. TOCDF can process these projectiles and mortars in the Projectile Handing System (PHS) because they are similar to items in the stockpile. The standard PHS may not be suitable for use because of significant corrosion, deformation, degradation of agent, or other defects that may be present. A similar disposal process to that used successfully by JACADS to process the Solomon Island rounds (see Section 2.1) could then be used.

Table 3-8. Deseret Chemical Depot and Dugway Proving Ground NSCM Inventory

Non-Stockpile Inventory										
	Agent									
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	Total
Deseret Chemical Depot										
Chemical Samples										**47**
Miscellaneous containers		45								45
Ampoule	1									1
Ton container		1								1
Chem. Agent Ident. Sets (CAIS)										**1189**
K953, K941		673	96		96					865
Cyanogen chloride (CK)								96		96
Ethyl malonate (GS)								96		96
Nitrogen Mustard (HN)								96		96
TBD									36	36
Total	**1**	**719**	**96**		**96**			**288**	**36**	**1236**
Dugway Proving Ground										
Munitions										**37**
4.2-inch mortar (explosive)		6	12						4	22
105mm projectile (explosive)		1	4						1	6
155mm projectile (explosive)	1									1
T77 155mm projectile (explosive)	1									1
6-inch projectile (explosive)	1									1
M125 Half bomblet (explosive)	1									1
155mm (non-explosive)	1								1	2
4.2-inch (non-explosive)		2								2
M139 Half bomblet (non-explosive)	1									1
Chemical Samples										**90**
Containers, bottles, vials	48	8	1	28						85
Bottles (EA-1699)									5	5
Total	**54**	**17**	**17**	**28**					**11**	**127**
Total-Deseret+Dugway	**55**	**736**	**113**	**28**	**96**			**288**	**47**	**1363**

Non-Explosive NSCM (Mustard)—TC and 4.2-inch mortar. Rating: High. TOCDF can process the TC in the Bulk Container Handling System (BCHS) and the mortar in the PHS because they are similar to items in the stockpile. As described above, deteriorated rounds may require special tooling.

Explosive NSCM (GB)—T77 155mm and 6-inch projectiles; M125 bomblets. Rating: Medium. The TOCDF PHS can process these munitions but may require the cutting tool at the Nose Closure Removal Station of the Projectile and Mortar Disassembly machine that was demonstrated at JACADS on the Solomon Island rounds. The T77 is different from stockpile 155mm projectiles because its nose is welded rather than threaded onto its body. The 6-inch projectile is not well characterized and assumed to be a 155mm projectile of undetermined series. The M125 also differs from munitions in the stockpile, but is similar in size to 105mm projectiles, with much thinner walls and the same type of fill.

Non-Explosive NSCM (GB)—155mm projectile. Rating: High. TOCDF can process this one 155mm projectile in the PHS because it is similar to those in the stockpile.

Non-Explosive NSCM (GB)—M139 half bomblet. Rating: Medium. The M139 is a non-explosive hemisphere that is not similar to any stockpile munition, but it is small and has a thin-walled aluminum shell. Its interior could possibly be processed using a modified rocket shear machine (RSM) or manually accessed with simple tools, drained (with agent incinerated) and fed to the MPF. Alternatively, the full, perforated container could be fed directly to the MPF.

Explosive NSCM (L)-Projectiles and Mortars. Rating: Low. The projectiles and mortars have a similar physical configuration to those in the stockpile, but they are filled with L. Although these munitions could be processed at TOCDF as described above for the explosive H mortars, additional requirements related to L content present significant challenges. First, work area and HVAC monitoring for L would be required. In addition, a suitable decontamination solution would need to be available. The presence of arsenic in L is also problematic. The incineration of L will produce arsenic compounds such as acid and oxides that the TOCDF pollution abatement system is not currently capable of efficiently removing. Arsenical emissions may also require monitoring.

Non-Explosive NSCM (L)—Chemical Samples. Rating: Low. As noted above, the TOCDF Baseline Incineration process is not designed for L. Although the TOCDF BCHS could access the agent, processing L would require major modifications to the facility.

Chemical Samples (Mustards, GB, GD, VX, EA-1699)—Ampoules, bottles, vials, and other containers. Rating: Medium. TOCDF can incinerate these agents (although some are different from the stockpile), but it was not designed for containers this small and would require special handling and accessing operations. The BCHS may be of some use with the larger containers, but manual drilling could be adequate since there are few such containers. Once accessed, metal containers could be drained first or fed full to the MPF for decontamination. Glass containers could be crushed first or fed directly to the furnaces for processing.

CAIS (Mustards). Rating: Medium. These items differ from the types in the stockpile but contain the same types of agent. Their handling requirements would be different from stockpile items, but they might be processed in a manner similar to that described above with regard to bulk containers. There is minor uncertainty for HN CAIS related to incineration kinetics, personal protective equipment, and monitoring.

CAIS (CG, CK). Rating: Low. These items differ from the stockpile CWM. They are non-explosive, contain a material that is a gas at standard conditions, and might be difficult to contain from the point of access through destruction. Handling and monitoring requirements for these ampoules and agents would be different. The containers might be chilled to reduce the vapor pressure of the fill or bagged to contain the agent when they are broken, and then charged to an incinerator, as was done for bottles of mustard at the JACADS MPF. Alternatively, incinerator heating might be sufficient to increase the agent pressure, weaken the ampoules, and rupture them inside an incinerator (MPF or DFS). The effectiveness of the incineration and effluent treatment remains to be demonstrated.

CAIS (GS [ethyl malonate]). Rating: Medium. These items differ from the types in the stockpile; however, they contain a liquid that while physically similar to the stockpile's GB, is less toxic. Their handling requirements would be different from stockpile items, but they could be processed in a manner similar to that described above with regard to other CAIS. In the present case, though, the use of the LIC to incinerate drained agent is also possible. Monitoring of GS concentrations in work areas and perhaps even in HVAC exhaust or stacks might be required.

CAIS (5% L in chloroform) Rating: Medium. These items differ from the types in the CWM stockpile. As described above, the processing of L presents several significant challenges and difficulties to TOCDF. Nevertheless, the low concentration of arsenic increases the possibility of successful incineration, with a low feed rate if necessary to meet the emission standard. The handling requirements would be different from stockpile items, but the CAIS ampoules with L might be processed in a manner similar to that described above with regard to other CAIS. The use of the LIC to incinerate drained agent is also possible.

3.4.3 CAMDS Technical Compatibility Analysis

CAMDS is the U.S. Army's test-bed for chemical demilitarization technologies and has unique capabilities, as described in Section 3.3.1. Facilities are currently being installed to demilitarize 10 stockpile TCs of L by a peroxide/caustic neutralization process. CAMDS also plans to chemically treat four TCs of GA nerve agent. Thus, CAMDS possesses the capability to demilitarize the variety of types of CWM in the stockpile, as well as some unique capabilities, such as L processing. The compatibility analysis is described below.

Explosive NSCM (Mustard)—105mm projectile and 4.2-inch mortars. Rating: Medium. CAMDS has processed these items in the past and may only need minor setup (retooling) to reestablish the capability.

Non-Explosive NSCM (Mustard)—TC and 4.2-inch mortar. Rating: Medium. CAMDS has processed these items in the past and may only need minor setup (retooling) to reestablish the capability.

Explosive NSCM (GB)—T77 155mm and 6-inch projectiles; M125 bomblets. Rating: Medium. CAMDS has processed 155mm projectiles similar to the T77 and 6-inch projectiles in the past and should only need minor setup (retooling) to reestablish the capability. As with TOCDF, CAMDS may require the cutting tool at the Nose Closure Removal Station of the Projectile and Mortar Disassembly machine that was demonstrated at JACADS on the Solomon Island rounds. CAMDS is versatile and experienced at fabricating special tooling and performing low-rate operations on difficult munitions.

Non-Explosive NSCM (GB)—155mm projectile, M139 bomblet. Rating: Medium. CAMDS has processed 155mm projectiles in the past and may only need minor setup (retooling) to reestablish the capability. The M139 is not similar to stockpile items, as described in Section 3.3.2, but could be disassembled or the agent accessed with simple tools. The drained agent could then be incinerated in the LIC and the carcass thermally decontaminated in the MPF.

Explosive NSCM (L)—Projectiles and mortars. Rating: Medium. CAMDS has processed items of the same physical configuration, but possibly not filled with L, in the past and may only need minor setup (retooling) to access the fill. CAMDS is installing equipment for L neutralization.

Non-Explosive NSCM (L)—Chemical Samples. Rating: Medium. CAMDS is experienced in processing a wide variety of chemical samples and is installing equipment for L neutralization. This container will require simple accessing/draining.

Chemical Samples (GB, GD, H, HD, HS, HT, VX, EA-1699)—Ampoules, bottles, vials, and other containers. Rating: Medium. CAMDS is experienced in processing a wide variety of chemical samples, including many of these items, and can process all of these agents. CAMDS could process these in a way similar to TOCDF, as discussed in Section 3.3.2.

CAIS (Mustards). Rating: Medium. These containers differ from the types in the stockpile, but contain the same types of agent. They might be processed in a manner similar to that described above with regard to bulk containers.

CAIS (CG and CK) Rating: Low. As discussed previously, these items differ from the types in the stockpile and contain a material that is a gas at standard conditions that might be difficult to contain from the point of access through destruction.

CAIS (GS [ethyl malonate]). Rating: Medium: As discussed previously, this item differs from the stockpile CWM but contains a liquid that while physically similar to the stockpile's GB is less toxic. NSCM handling requirements would be different from stockpile items, but the CAIS could be processed in a manner similar to the CAIS at JACADS. Monitoring of GS concentrations in work areas and perhaps even in HVAC exhaust or stacks might be required.

CAIS (5% L in chloroform). Rating: Medium: As discussed previously, this item differs from types in the stockpile. CAMDS is installing equipment to process "pure" L. It may not be able to handle L dissolved in chloroform. This item may be more amenable to processing through a CAMDS incinerator under controlled conditions.

3.4.4 Stockpile Destruction Schedule Compatibility

TOCDF Ratings. G, H, & VX items: High; L items: Low; Industrial Chemicals, HN, and EA-1699: Medium.

The TOCDF schedule indicates completion of stockpile operations about three years before the treaty deadline. Processing the G, H, and VX agent-filled NSCM could be accomplished during or after an existing agent campaign or in the three-year period after stockpile operations are complete. Processing of the CAIS with industrial chemicals (CG, CK, GS), HN, or EA-1699 may require testing or trial burns and would likely have to wait until the stockpile destruction is complete. Similarly, even if it is determined to be technically feasible to process all of the L items, excessive additional time might be required for permit processing, modification, systemization, and operation with feed rates slow enough to meet the arsenic emission concentration standard.

CAMDS. Rating: High. CAMDS is not a stockpile disposal facility and therefore is not affected by the 2007 deadline. However, CAMDS will be providing support to TOCDF for demilitarization of some VX items (e.g., VX mines) and must complete that demilitarization by 2007. CAMDS operations are also affected by the priorities of its various projects and tests. Thus, NSCM demilitarization at CAMDS would have to be given a priority consistent with its completion by 2007.

3.4.5 Political/Public Outlook

TOCDF and CAMDS Rating: Medium

Information pertaining to the Utah facilities was obtained from the PAO, the Outreach Office Site Manager, and the Outreach Specialist. In addition, two letters have been received in reponse to the Army's 1 June 2000 announcement of the initiation of the feasibility study. Information was also obtained from a newspaper article discussing the issues surrounding NSCM disposal at CDFs including TOCDF (see Appendix A).

Commitments. The existing TOCDF permit requires that once the stockpile disposal is complete, the facility and the equipment are to be destroyed; however, there has been some discussion by the State and County about possibly leaving the structure in place after the equipment is destroyed. As discussed in the PMNSCM general commitments section (Section 2.4), the public has also been told that TOCDF will be used to dispose of stockpile CWM only.

CAMDS operates under a Resource Conservation and Recovery Act (RCRA) Part B permit issued in September 1999. Prior to that, CAMDS operated under a RCRA Research, Development, and Demonstration (RD&D) permit. In addition, CAMDS processed empty PMNSCM TCs in 1999-2000.

Public Acceptability. State officials, including the governor, and state regulators, as well as the CAC, are very concerned that the change implemented by Public Law 106-65 could result in CWM items being brought to DCD from out-of-state, although this is not the Army's intent. The state officials, regulators, and CAC were of the understanding that the PMNSCM mobile systems would be taken to NSCM locations for disposal of the NSCM. There was an initial discussion of NSCM disposal at TOCDF or CAMDS at the 20 July 2000 meeting. The discussion indicated that there could be support for the disposal of NSCM from both DCD and DPG in these facilities. Some CAC members indicated that they were interested in seeing the findings of the current study before discussing the issue further. Concern was also expressed about any changes in the TOCDF closure schedule.

Residents living near DCD as well as those in Salt Lake City generally are in favor of disposing of the CWM at DCD as fast as possible. At meetings, people appear primarily interested in the technology to be used, not in NSCM. The extent to which the public even differentiates between stockpile and NSCM is not clear. The perception is that the public generally would not have a problem with disposing of the existing NSCM items at DCD in TOCDF or CAMDS, but that there could be mixed feelings, the main concern being that additional NSCM could follow after the existing NSCM is destroyed.

Two letters have been received from the public in response to the Army's announcement of the feasibility study (see Appendix A). One from the Director of Families Against Incineration Risk (FAIR) expresses opposition to destruction of NSCM at TOCDF. The letter states "We were told that no other military waste would be processed at this facility, and we continue to rely on those assurances...We do not support the use of our incinerator to destroy non-stockpile material for several reasons." The letter then raises a number of questions related to the proposed use of the incinerator for NSCM. The Director of FAIR is also quoted raising similar concerns in the newspaper article in Appendix A. The second letter is from an employee at TOCDF and supports future use of the facility after the stockpile mission is completed as being both fiscally responsible and environmentally sound.

With regard to moving NSCM items from DPG to DCD, the perception is that it would generally not be a problem, although it is possible there could be some opposition from a local Indian tribe and from the Chemical Weapons Working Group.

Based on the above, the political/public outlook is rated as being medium for using TOCDF or CAMDS to dispose of the existing inventory of NSCM.

3.4.6 Determination of Overall Compatibility

3.4.6.1 TOCDF Overall Compatibility

Table 3-9 summarizes the findings of this initial screening with respect to using TOCDF for demilitarization of NSCM currently stored at the DCD and DPG. Because the NSCM inventory is so varied, the compatibility ratings also vary greatly. The political/public outlook forecast appears medium regarding acceptance to allow processing of locally stored NSCM in TOCDF. The stockpile schedule compatibility ratings vary depending on agent type and similarity to the DCD stockpile. All of the NSCM have some degree of compatibility with TOCDF. However, some of these NSCM—including explosive projectiles with L, bulk samples with L, and CAIS with gaseous agents (CG and CK)—are rated as having low overall compatibility. The rating of low compatibility is due to the difficulty in processing those fills. Further assessment is needed for these NSCM to make a sound, defensible recommendation for disposal. The remaining NSCM can be separated into two categories rated as having either medium or high compatibility. The first category includes the T77 155mm, 6-inch, M139 half bomblet, and M125 munitions, as well as ampoules, bottles, vials, or other containers that differ from stockpile items, but contain fills that are either of the same (e.g., HD, GB, VX) or somewhat similar (GA simulant, GD, HN-1, or EA-1699) type. These NSCM could be processed without major difficulty at TOCDF and are considered to have medium compatibility with the TOCDF stockpile disposal program. The second category includes the various 4.2-inch, 105mm, and 155mm M121 series munitions with mustard or GB fills and a mustard TC. These are similar to stockpile items and are considered highly compatible with the TOCDF stockpile disposal program. It is recommended that all NSCM at the DCD and DPG continue to be assessed in Stage 2 of this study with TOCDF.

3.4.6.2 CAMDS Overall Compatibility

Table 3-10 summarizes the findings of this initial screening with respect to using CAMDS for demilitarization of NSCM currently stored at the DCD and DPG. The political/public outlook forecast appears medium regarding acceptance of processing of locally stored NSCM in CAMDS. The stockpile schedule compatibility ratings were high since at this time the only treaty items CAMDS is scheduled to process is VX mines. Due to the flexibility of CAMDS and their experience, all of the NSCM have some degree of overall compatibility. The gaseous CG and CK NSCM were the only NSCM to receive low overall compatibility ratings because it is difficult to process those fills. Further assessment is needed for these NSCM to make a sound, defensible recommendation for disposal. The remaining NSCM were all rated as having medium overall compatibility because CAMDS has the experience and equipment to demilitarize a variety of CWM. It is recommended that all of the NSCM at the DCD and DPG continue to be assessed in Stage 2 of this study to determine compatibility with CAMDS.

Table 3-9. TOCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Deseret Chemical Depot								
Chemical Samples								
Miscellaneous containers		**M** (M,H,M)						
Ampoule	**M** (M,H,M)							
Ton container		**H** (H,H,M)						
Chem. Agent Ident. Sets (CAIS)								
K953, K941		**M** (M,H,M)	**M** (M,L,M)		**L** (L,M,M)			
Cyanogen chloride (CK)								**L** (L,M,M)
Ethyl malonate (GS)								**M** (M,M,M)
Nitrogen Mustard (HN)								**M** (M,M,M)
TBD[a]								
Dugway Proving Ground								
Munitions								
4.2-inch mortar (explosive)		**H** (H,H,M)	**L** (L,L,M)					
105mm projectile (explosive)		**H** (H,H,M)	**L** (L,L,M)					
155mm projectile (explosive)	**H** (H,H,M)							
T77 155mm projectile (explosive)	**M** (M,H,M)							
6-inch projectile (explosive)	**M** (M,H,M)							
M125 half bomblet (explosive)	**M** (M,H,M)							
155mm (non-explosive)	**H** (H,H,M)							
4.2-inch (non-explosive)		**H** (H,H,M)						
M139 half bomblet (non-explosive)	**M** (M,H,M)							
Chemical Samples								
Containers, bottles, vials	**M** (M,H,M)	**M** (M,H,M)	**L** (L,L,M)	**M** (M,H,M)				
Bottles (EA-1699)								**M** (M,M,M)

H = High, M = Medium, L = Low, N = No/None
Overall rating appears first in bold followed by the three area ratings

[a] Not rated because chemical fill is unknown.

Table 3-10. CAMDS Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Deseret Chemical Depot								
Chemical Samples								
Miscellaneous containers		**M** (M,H,M)						
Ampoule	**M** (M,H,M)							
Ton container		**M** (M,H,M)						
Chem. Agent Ident. Sets (CAIS)								
K953, K941		**M** (M,H,M)	**M** (M,H,M)		**L** (L,H,M)			
Cyanogen chloride (CK)								**L** (L,H,M)
Ethyl malonate (GS)								**M** (M,H,M)
Nitrogen Mustard (HN)								**M** (M,H,M)
TBD[a]								
Dugway Proving Ground								
Munitions								
4.2-inch mortar (explosive)		**M** (M,H,M)	**M** (M,H,M)					
105mm projectile (explosive)		**M** (M,H,M)	**M** (M,H,M)					
155mm projectile (explosive)	**M** (M,H,M)							
6-inch projectile (explosive)	**M** (M,H,M)							
M125 half bomblet (explosive)	**M** (M,H,M)							
155mm (non-explosive)	**M** (M,H,M)							
4.2-inch (non-explosive)		**M** (M,H,M)						
M139 half bomblet (non-explosive)	**M** (M,H,M)							
Chemical Samples								
Containers, bottles, vials	**M** (M,H,M)	**M** (M,H,M)	**M** (M,H,M)	**M** (M,H,M)				
Bottles (EA-1699)								**M** (M,H,M)

H = High, M = Medium, L = Low, N = No/None
Overall rating appears first in bold followed by the three area ratings

[a] Not rated because chemical fill is unknown.

3.5 Newport Chemical Depot, Newport, Indiana

3.5.1 Chemical Agent Disposal Facility Description and Inventories

The Newport Chemical Agent Disposal Facility (NECDF) is currently under construction and will use neutralization/supercritical water oxidation (Neut/SCWO) to destroy the stockpile of VX-filled TCs. The agent is drained from the TCs and is neutralized by caustic hydrolysis. Post-treatment of the neutralized hydrolysate involves SCWO (using water under high-temperature and high-pressure) to oxidize and break down the organic material in the neutralent.

The stockpile inventory at Newport consists of VX-filled TCs. No NSCM is stored at the Newport Chemical Depot (NECD). However, it is possible that small quantities of VX or VX breakdown products could be discovered in piping or tanks during the ongoing operations to dismantle the adjacent former VX production facility. Any CWM found would become part of the NSCM inventory.

3.5.2 Technical Compatibility Analysis

NSCM recovered during demolition of the former VX production facility could potentially be processed in NECDF with minor modifications.

Neat VX. Rating: Medium (if found). VX discovered during the operations to dismantle the former VX production facility would be drained into a suitable container and treated as an NSCM. NECDF can process the VX, but there are unknown (but expected minor) handling, draining, and decontamination issues relating to the size of the containers.

3.5.3 Stockpile Destruction Schedule Compatibility

Rating: High (if found). Unless the demolition efforts discover NSCM VX in unanticipated high levels, there would be no significant effect on the NECDF schedule or treaty deadline.

3.5.4 Political/Public Outlook

Rating: High

Information pertaining to Newport was obtained from the PAO, the Outreach Office Site Manager, and the Outreach Office Administrative Assistant.

Commitments. As discussed in the PMNSCM general commitments section (Section 2.4), the Army has consistently made three major commitments to the public at Newport: (1) only existing stockpile items would be destroyed in the facility, (2) no other items would be transported into the facility, and (3) once the disposal was completed, the facility would be decontaminated and destroyed.

Public Acceptability. The public is very accepting of the neutralization technology that is permitted for the facility. Public meetings are well attended, and most people are interested in the technology, not what will happen down the road. The issue of NSCM disposal has never been discussed at any public meetings. There have been no responses or comments from the public following the Army's announcement of the feasibility study.

Some of the public has expressed an interest in finding other uses for the facility once the stockpile is destroyed. Some, including the CAC, have suggested using it for NSCM, while others have suggested using it for hazardous waste. Some want it closed down after the stockpile is gone. The perception is that the state would be in favor of leaving the facility there if that is what the people want.

Based on the above, the political/public outlook is rated as being high for using NECDF to dispose of any NSCM discovered during the demolition of the former VX production facility.

3.5.5 Determination of Overall Compatibility

In the unlikely event that bulk/neat VX is found during the dismantling of the former VX production facility, it should be possible to process such NSCM in NECDF. The NSCM processing should not extend the NECDF operational schedule past the 2007 CWC deadline. If such NSCM were generated, the overall rating is estimated to be medium because of similarities to materiel to be processed, little anticipated effect on the schedule, and a favorable political/public outlook forecast. At this time, there is no need to continue evaluation of NECDF.

3.6 Pine Bluff Arsenal, Pine Bluff, Arkansas

3.6.1 Chemical Agent Disposal Facility Description and Inventories

The Pine Bluff Chemical Agent Disposal Facility (PBCDF), currently under construction, will dispose of the stockpile inventory at the Pine Bluff Arsenal (PBA). PBCDF uses baseline reverse assembly followed by incineration, but it is smaller than most baseline facilities because there are no projectiles or mortars in the PBA stockpile inventory.

The stockpile inventory at PBA consists of HD- and HT-filled TCs, GB and VX rockets, and VX land mines. The NSCM inventory is shown in Table 3-11. For screening purposes, about 700 mortars of unknown fill were assumed to have fills in the same proportion as those already determined to be present. Assumptions were also made in allocating unknown and unspecified CAIS kits and components to the agent and chemical fill types indicated in the table.

3.6.2 Technical Compatibility Analysis

The technical compatibility of each type of PBA NSCM inventory with PBCDF is discussed below.

Explosive NSCM (Mustard). Projectiles (75mm and Livens) and Mortars (4.2-inch) Rating: Low. PBCDF can process mustard, but it is not configured to handle or process projectiles or mortars—there is no reverse assembly equipment, and finding a suitable location to house it would be difficult. PBCDF could acquire new equipment similar to the saw that was developed by JACADS to process corroded and damaged 155mm projectiles from the Solomon Islands (Raytheon, 2000b). However, the explosive containment rooms may be too small for all of the disassembly equipment that may be required. Following explosive removal, the transfer of munitions to the MPF for thermal treatment may also be challenging. Note that construction of PBCDF is too far along for the extensive facility and equipment redesign needed to allow standard processing of NSCM projectiles and mortars.

Traktor Rockets (HN-3). Rating: Low. The German-made traktor rockets are unique to PBA. PBCDF can process sulfur mustards (HD and HT) and should be capable of processing nitrogen mustard (HN-3) although it is not part of the PBA stockpile. PBCDF has a Rocket Handling System, but it is only for M55 rockets, and would likely require significant development and equipment modifications in order to process the traktor rockets since they are larger in diameter, of a more complex shape, and significantly heavier.

Bombs (M70A1). Rating: Medium. PBCDF has a Bulk Container Handling System (BCHS) and incinerators to process other mustard bulk items (TCs). Bombs are typically stored without explosive components, but it is uncertain if these bombs are non-explosive. The BCHS can process (handle, punch, and drain) non-explosive bombs but it has never been tested with M70A1 bombs (since this type of bomb is not in the stockpile inventory). Minor modifications to the BCHS are required if the bombs are non-explosive; extensive

Table 3-11. Pine Bluff Arsenal NSCM Inventory

Non-Stockpile Inventory										
Item	Agent									Total
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	
Munitions										**1,256**
4.2-inch mortar (explosive)		562	112		56					**730**
150mm traktor rocket (explosive)								479 HN		**479**
75mm projectile (explosive)		15							1	**16**
200mm Livens projectile (explosive)		9			3				3	**15**
M70A1 bomb (explosives unknown)		9								**9**
155mm projectile (explosive)									1	**1**
105mm projectile (explosive)									1	**1**
TBD (explosive)			1							**1**
75mm projectile (non-explosive)		3								**3**
4-inch cylinder (non-explosive)		1								**1**
Chemical Samples										**4,305**
Ton container	2									2
Ton container (empty, previously L)								4,300		4,300
Lab sample				2						2
Vial			1							1
Chem. Agent Ident. Sets (CAIS)										**7,119**
Mustard (H/HD/HS)		5,763								5,763
Lewisite (L)			397							397
Chloropicrin (PS)								396		396
Phosgene (CG)					396					396
Chloroacetophenone (CN)								17		17
Adamsite (DM)								17		17
Triphosgene (TP)								17		17
Cyanogen chloride (CK)								33		33
Ethyl malonate (GS)								33		33
Nitrogen mustard (HN)								50		50
Binary										**57,123**
M20						56,820				56,820
Drum						7	293			300
Box, container, can							3			3
Total	**2**	**6,362**	**511**	**2**	**455**	**56,827**	**296**	**5,342**	**6**	**69,803**

development and equipment modifications may be required (e.g., addition of explosion containment) if these bombs contain explosives that could not be removed before processing.

Non-Explosive NSCM (Mustard)—CAIS, 4-inch Cylinder, 75mm projectiles. Rating: Medium. PBCDF can process mustard, but special accessing of these items may be needed. CAIS could be fed directly to the DFS or the MPF without first accessing and removing the fill. If accessing is required, the CAIS could simply be crushed, as demonstrated at JACADS. The exact physical configuration of the 4-inch cylinder is not known. The BCHS would have to be modified to process an item this small. If the walls are thin enough, the cylinder could be fed to the RSM, sectioned, and fed to the DFS. A simpler approach for the 4-inch cylinder and projectiles would be to manually drill holes into the reservoir and feed the full (or drained) item to the MPF under a special thermal cycle.

Non-Explosive NSCM (GB)—TCs. Rating: High. PBCDF has a BCHS and can process GB TCs (although there are none in the PBA stockpile). TCs may be able to be processed concurrently during the GB rocket campaign.

Explosive NSCM (L)—Mortars. Rating: No/None. PBCDF does not have a projectile/mortar handling system, and the baseline incineration process is not designed to incinerate L (or any other arsenic compounds). Significant redesign, development, and/or systemization work would be required in the areas of L incineration, monitoring, and decontamination and in disposal of arsenic wastes.

Non-Explosive NSCM (L). Empty TCs (previously containing L). Rating: Medium. A portion (approximately 650) of these TCs were sampled and analyzed in 1995 and indicated that L had been present at least once in their history. Although no recoverable material was suggested, stable forms of L, arsenic, and mercury were detected. PBCDF has a BCHS, but the baseline incineration process is not designed to process L (or residual mercury). Pre-treatment, including particulate/scale removal, is necessary to verify cleanliness before thermal decontamination in the MPF. If adequately decontaminated (3X), these TCs could be sent to the Army's Rock Island Arsenal for smelting in the car-bottom furnace.

Explosive NSCM (CG)—Projectiles and Mortars. Rating: No/None. PBCDF is not designed to process CG (CG is not in the stockpile). A major processing complexity is that CG is a gaseous fill. A process would have to be developed to contain, collect, quantify, transfer, and incinerate the gas. Conceivably, the munitions could be cooled to liquefy the CG; however, significant development and/or systemization work is required. Additional development is also required for the monitoring and carbon filter systems.

Bulk Containers—Lab Samples (VX). Rating: Medium. The PBA stockpile inventory does contain VX items but no samples. Minor modifications to the plant and the SOPs would be required to process samples containing VX.

CAIS (Industrial Chemicals and HN). Rating: Medium. Although a minor challenge, special accessing of these items is needed, as discussed above for previous CAIS. PBCDF was not designed to process agent HN or industrial chemicals chloropicrin (PS), chloroacetophenone (CN), triphosgene (TP), cyanogen chloride (CK) or ethyl malonate (GS). There is minor uncertainty related to the incineration kinetics, personal protective equipment, and monitoring associated with these items.

CAIS (L, DM) and a Vial (L). Rating: Low. As previously noted, PBCDF was not designed for processing CAIS or arsenicals. However, because of the small amount of fills present in these items, PBCDF might be acceptable for processing with the appropriate controls and modifications. This could include reduced processing rates to ensure emissions limitations are met.

CAIS (CG and CK). Rating: Low. As previously noted, PBCDF was not designed for CAIS or CG. CAIS poses some minor accessing issues, but CG and CK are gaseous and pose a difficult containment problem. However, if the CAIS can be fed intact to the DFS or MPF, containment would not be problem.

Binary Precursors (DF and QL). DF Rating: Low, QL Rating: Medium. There are no binary items or DF or QL chemicals in the stockpile inventory. Processing these binary items may require new or modified equipment/systems related to unpacking, handling, transfer, liquid drain/quantification, and monitoring. Hawthorne Army Depot performed binary processing in 1998. Although the precursor was different, a similar method to access and drain the material could be used by PBCDF. The processing of DF M20s has been rated low for technical compatibility because of the large number of items present and the total quantity of DF. Additional replacements of the LIC refractory brick may be required due to the deterioration of the brick and mortar when processing compounds containing fluorine. The processing of QL Drums and other items has been rated medium for technical compatibility because there are fewer items and fewer refractory wear issues.

3.6.3 Stockpile Destruction Schedule Compatibility

The PBCDF schedule indicates complete processing of its stockpile inventory near the end of 2006. This leaves only about a 6-month time period in which additional campaigns could be performed to process NSCM.

Some of the NSCM may be able to be processed concurrently during a planned stockpile campaign with little or no effect on the schedule (high schedule compatibility). This includes the processing of the non-stockpile GB TCs during the stockpile GB rocket campaign. Also, the HD CAIS may be able to be processed in the DFS during the processing of stockpile HD TCs in the LIC and MPF.

The processing of the H mortars (minimum 10, estimated maximum 562) is rated low with respect to schedule compatibility because of the uncertainty in the amount of this munition

present. Assuming that modifications to PBCDF were made to allow the processing of less than pristine non-stockpile projectiles and mortars, the processing of H mortars in a new campaign could take up to six months or more. Note: JACADS processed 109 Solomon Island 155mm HD projectiles in 64 days (time includes operations and some equipment modifications). The actual processing of small numbers of non-stockpile projectiles or mortars may require relatively small amounts of time (days to a few months) for destruction operations. However, time for equipment/tooling modification, systemization, and testing could add an additional several months to the schedule, resulting in an overall significant effect on the stockpile schedule. On the other hand, some of this modification and systemization work could possibly be performed in the explosive containment rooms (ECRs) while the HD TC campaign is in process. The processing of the small numbers of miscellaneous projectiles or mortars items has been rated as medium with respect to schedule compatibility.

The time required to process items or agents that have not been processed in PBCDF (e.g., traktor rockets, empty L TCs, CAIS with various fills, and binary containers) could significantly increase if trial burns or furnace performance tests are required. The number of non-stockpile traktor rockets is not that large (479), and their processing operations possibly could be completed within a few months. However, a HN trial burn and significant equipment/tooling modifications, systemization, and testing time would be required before these items could be processed, which is apt to significantly increase the stockpile schedule and affect treaty compliance. On the other hand, some of this modification and systemization work could be performed in the ECR(s) during the HD TC campaign. The processing of the traktor rockets has been rated as low with respect to schedule compatibility.

The processing rate of the empty L TCs is uncertain; however, the need to process the large number (4,300) of these items could lengthen the PBCDF stockpile disposal schedule by several months. The processing of these TCs has been rated as low with respect to schedule compatibility. An alternate plan would be to decontaminate the TCs to 3X and send them to Rock Island Arsenal for smelting.

CAIS with various agent and chemical fills may be able to be processed in an existing campaign or during the same campaign. On the other hand, each type of CAIS may require a separate campaign since mixed agent/fill processing is not a fundamental capability of PBCDF. Because of the uncertainty, the schedule compatibility of each of these types of CAIS has been rated medium.

The processing of the large number of binary items (especially the 56,820 DF M20s) could lengthen the stockpile disposal schedule by several months; additional time would be required if significant tooling modifications need to be implemented or if multiple LIC refractory rebrickings are required. The schedule compatibility of the DF has been rated low, while the schedule compatibility of the QL has been rated medium because of the smaller number of items present.

3.6.4 Political/Public Outlook

Rating: Low

Information pertaining to Pine Bluff was obtained from the PAO and the Outreach Specialists. In addition, three letters have been received in response to the Army's 1 June 2000 announcement of the initiation of the feasibility study (see Appendix A). The letters are from the Arkansas Department of Environmental Quality (ADEQ), The Allliance (Economic Development of Jefferson County), and a private citizen. Information was also obtained from items in the local paper.

Commitments. The Army has stated that no other portions of the stockpile will be shipped into Pine Bluff. As discussed in the PMNSCM general commitments section (Section 2.4), the Army has made the commitment that only the Pine Bluff stockpile CWM would be destroyed in the facility and that the facility would be dismantled when the stockpile was destroyed.

Public Acceptability. Some Arkansas officials have voiced opinions about NSCM disposal. Both State Legislature Senator Jay Bradford and James Morgan, the mayor of White Hall, Arkansas (where the White Hall Chemical Stockpile Outreach Office is located), have expressed reservations about destroying NSCM in PBCDF. Both are concerned that the facility would be kept open and used to destroy other items after the stockpile is gone. In addition, Senator Bradford is concerned about the Army changing its message about what it plans to process at the facility. The ADEQ and the Arkansas Department of Health also do not favor NSCM being destroyed at PBCDF. In response to the Army's announcement of the feasibility study, Randall Mathis, the Director of ADEQ, states that ADEQ "...discourage[s] Congress from pursuing further study of disposal options using the chem demil facilities due to cost, technical, as well as public credibility factors...we believe our long-standing commitment to the Pine Bluff community and our representation to the community that the Congress is honor-bound to keep its commitment outweighs the imagined need to conduct a costly study of which the conclusion is already known" (see Appendix A).

The PAO has been quoted in the *Pine Bluff Commercial Online News* (see Appendix A) as stating, "Those type of [non-stockpile] configurations do not match what we have at our facility. I'm concerned these incinerators were not made for nonstockpile materiel." The site manager for PBA's NSCM was quoted in the same article stating "It's a tremendous amount of cost with the development and research—I believe Congress will find it economically unfeasible." Another newspaper article quotes the PAO stating "I'd be concerned if we, the Pine Bluff Chemical Disposal Facility, had to run a system to destroy these types of weapons—but if Congress says we're going to do it, then that's what we're going to do."

With regard to the local community, the generally prevalent view appears to be that NSCM should not be disposed of in the PBCDF. There is also some confusion about the distinction between the stockpile and NSCM. It is not clear whether there would be a great deal of local opposition to using the facility only for the existing NSCM inventory at Pine Bluff. It is clear

that any such use would be opposed if it would slow down processing of the stockpile. The public does not appear to be concerned about using mobile systems to process NSCM at other storage sites or where CWM is uncovered and, in fact, feels that this may keep other NSCM from coming to Pine Bluff. In an editorial (6 June 2000), the *Pine Bluff Commercial* states, "Instead of the study Congress is now directing, let the federal government step up efforts to develop such a transportable system. It may well be the safest way to go." On the other hand, one letter has been received from the public in response to the Army's announcement of the study (see Appendix A) that supports the disposal of NSCM at PBCDF. The letter indicates, "I'm confident that the Army studies will show this multi-use option to be feasible and extremely cost effective." A citizen of White Hall has on the other hand expressed concerns to the Public Outreach Office about using the facility for NSCM based on the recent release at TOCDF.

However, there may be a dichotomy between the general public and local business community regarding the future disposition of the facility. The local business community, in particular The Alliance (Greater Pine Bluff Chamber of Commerce, Jefferson County Industrial Foundation, and Pine Bluff-Jefferson County Port Authority), would support facility re-use and turning the facility over to the community. Possible suggestions for re-use included hazardous waste or medical waste disposal. However, in response to the Army's announcement of the feasibility study (see Appendix A), The Alliance indicated that "we do not endorse the use of the chemical demilitarization facility for the disposal of non-stockpile munitions. We believe that entirely separate facilities will be required, utilizing different technologies than those now being deployed."

Based on the above, the political/public outlook is rated as being low for using PBCDF to dispose of any of the existing NSCM inventory. There appears to be considerable opposition to the idea from the public, the local and state officials, the state regulators, and the local press.

3.6.5 Determination of Overall Compatibility

Table 3-12 summarizes the findings of this initial screening with respect to using PBCDF for demilitarization of NSCM currently stored at the PBA. Because the PBA NSCM is so varied, the compatibility ratings also vary greatly. The political/public outlook forecasts difficulty in modifying the PBCDF permit to allow processing of NSCM and generally supports the use of another system such as the PMNSCM mobile systems. The stockpile schedule compatibility ratings vary depending on quantities and if items similar to the NSCM inventory are scheduled to be processed in PBCDF. The initial overall assessment rating of no compatibility is given to explosive projectiles and mortars with L and projectiles and mortars with CG because it is difficult to process those fills. It is recommended that no further compatibility assessment be performed for those items. The remainder of the PBA NSCM inventory was rated as having some overall compatibility with PBCDF. However, many of these items—including traktor rockets, DF, HD explosive projectiles and mortars, CAIS with arsenicals and CG, and a vial with L—are rated as having low overall compatibility. Some limited further assessment is needed for these items to make a sound, defensible recommendation for disposal. The remaining NSCM

will require more extensive further study and can be separated into two categories rated as having either medium or high compatibility. The first category includes the empty TCs; non-explosive mustard-filled projectiles, bombs, and cylinders; the remainder of the CAIS; and QL items that differ somewhat from Pine Bluff stockpile items. These NSCM could be processed without major modification to PBCDF and are considered to have medium compatibility with the PBCDF stockpile disposal program. The second category includes the GB TCs and the VX lab samples that could be readily processed at PBCDF and are rated highly compatible with the PBCDF stockpile disposal program.

Table 3-12. PBCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
Item	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Munitions								
4.2-inch mortar (explosive)		**L** (L,L,L)	**N** (N,-,-)		**N** (N,-,-)			
150mm traktor rocket (explosive)								**L** (L,L,L)
75mm projectile (explosive)		**L** (L,M,L)						
200mm Livens projectile (explosive)		**L** (L,M,L)			**N** (N,-,-)			
M70A1 bomb (explosives unknown)		**M** (M,M,L)						
155mm projectile (explosive)[a]								
105mm projectile (explosive)[a]								
TBD (explosive)[b]								
75mm projectile (non-explosive)		**M** (M,M,L)						
4-inch cylinder (non-explosive)		**M** (M,M,L)						
Chemical Samples								
Ton container	**H** (H,H,L)							
Ton container (empty, previously L)								**M** (M,L,L)
Lab sample				**H** (M,H,L)				
Vial			**L** (L,M,L)					
Chem. Agent Ident. Sets (CAIS)								
Mustard (H/HD/HS)		**M** (M,H,L)						
Lewisite (L)			**L** (L,M,L)					
Chloropicrin (PS)								**M** (M,M,L)
Phosgene (CG)					**L** (L,M,L)			
Chloroacetophenone (CN)								**M** (M,M,L)
Adamsite (DM)								**L** (L,M,L)
Triphosgene (TP)								**M** (M,M,L)
Cyanogen chloride (CK)								**L** (L,M,L)
Ethyl malonate (GS)								**M** (M,M,L
Nitrogen mustard (HN)								**M** (M,M,L)
Binary								
M20						**L** (L,L,L)		
Drum						**L** (L,L,L)	**M** (M,M,L)	
Box, container, can							**M** (M,M,L)	

H = High, M = Medium, L = Low, N = No/None
Overall rating appears first in bold followed by the three area ratings

[a] Not rated because agent fill is unknown.

[b] Not rated because munition type is unknown.

3.7 Pueblo Chemical Depot, Pueblo, Colorado

3.7.1 Chemical Agent Disposal Facility Description and Inventories

The Pueblo Chemical Agent Disposal Facility (PUCDF) will dispose of the stockpile inventory at the Pueblo Chemical Depot (PUCD). PUCDF is currently being designed, but the final treatment technology has not been determined. The Army is considering two incineration-based technology facilities and at least two alternative technology facilities. This analysis considers four potential PUCDF facilities: (1) baseline reverse assembly and incineration facility (PUCDF-Baseline), (2) modified baseline single-story single-incinerator facility (PUCDF-Modified), (3) ACWA Cryofracture/Neutralization/SCWO facility (PUCDF-Cryo/Neut/SCWO), and (4) ACWA Fluid-Accessing/Neutralization/Biotreatment (PUCDF-Fluid/Neut/Bio).

The PUCD stockpile inventory consists of explosively configured projectiles and mortars that contain mustard (HT, HD). The NSCM inventory consists of a small number of DOT bottles that contain mustard from leaking rounds that were drained into the bottles in 1986. Table 3-13 provides an inventory of the NSCM stored at PUCD.

3.7.2 Technical Compatibility Analysis

For analysis purposes, it is assumed that all technologies would be successful in processing the stockpile inventory at PUCD. The technical compatibility for processing NSCM is summarized below.

Non-Explosive NSCM (Mustard)—DOT Bottles. Rating: Medium. The four candidate technologies are designed for mustards but not for DOT bottles. Processing of DOT bottles will require minor handling modifications and special accessing procedures. Manual accessing (e.g., drilling) is an option for all candidates. In addition, cryofracture and fluid accessing could also be used with minor equipment modifications.

Table 3-13. Pueblo Chemical Depot NSCM Inventory

Non-Stockpile Inventory										
	Agent									
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	Total
Chemical Samples										
DOT Bottles		12								12
Total		12								12

3.7.3 Stockpile Destruction Schedule Compatibility

It appears likely that any of the four technologies under consideration would be able to process the 12 NSCM DOT bottles without significantly increasing the PUCDF schedule. However, it is uncertain whether stockpile disposal operations for some of the proposed facilities (especially the non-incineration technology facilities) will be completed by the 2007 deadline.

PUCDF-Baseline and PUCDF-Modified. Rating: Medium. The PUCDF-Baseline schedule indicates complete processing of the PUCD stockpile at the 2007 deadline, leaving no time to run a separate NSCM campaign. The PUCDF-Modified schedule is uncertain but may have reduced times required for construction because the plant would be smaller and simpler than PUCDF-Baseline. On the other hand, development and systemization time may be longer because of the facility modifications. It is probable that NSCM processing could be performed during existing PUCDF-Baseline or PUCDF-Modified stockpile projectile reject or leaker campaigns without significantly affecting the schedule or treaty compliance.

PUCDF-Cryo/Neut/SCWO and Fluid/Neut/SCWO. Ratings: Low. The PUCDF-Cryo/Neut/SCWO and PUCDF-Fluid/Neut/Bio schedules are uncertain, but stockpile disposal operations are unlikely to finish sooner than what is indicated for PUCDF-Baseline. It is probable that NSCM processing could be performed during normal, reject, or leaker campaigns.

3.7.4 Political/Public Outlook

Rating: Alternative Technology, Medium-High; Incineration, Medium

Information pertaining to Pueblo was obtained from the PAO and the Outreach Office Site Manager. In addition, one letter was received in response to the Army's 1 June 2000 announcement of the initiation of the feasibility study (see Appendix A). The letter is from the Pueblo Depot Activity Development Authority.

Commitments. The Army's commitment is that after the stockpile is destroyed, the entire Depot (except for some burial areas) will be turned over to the Pueblo Depot Activity Development Authority to be re-used as they see fit. Since a technology has not been chosen for Pueblo, the facility does not have a permit. Therefore, little additional effort might be needed to add the existing 12 DOT bottles to the permit, but this could depend on the technology selected for PUCDF.

Public Acceptability. In response to the Army's announcement of the feasibility study, the Chair of the Pueblo Depot Activity Development Authority expressed the Authority's concern over the potential delay in "closure, transfer and environmental cleanup." They are opposed to anything that slows down the process of transfer (see Appendix F).

The main concern for the public is the choice of the technology to be used for PUCDF. However, there is a significant portion of the public focused on eliminating the CWM at PUCD by the fastest means possible.

An integrated process team—consisting of state, depot, and public interest group personnel—is working on resolving permit issues. They are charged to prepare a permit application for each technology being considered so that they will be ready with a permit regardless of the technology. It is not clear whether NSCM will be included in the permit. The notice of intent for an environmental impact statement was sent out on 9 May 2000.

It is not clear that the public understands the difference between stockpile and non-stockpile, which may explain why the public has not been very vocal about NSCM. Except for the Pueblo Depot Activity Development Authority, no written or verbal comments have been received on disposal of NSCM. Since the public is not talking about NSCM issues, it does not appear that it would be a major concern, particularly if they could be processed with other items.

Based on the above, the stakeholder/political acceptability appears to be dependent on the technology chosen, medium-to-high for an alternative technology and medium for incineration, for using PUCDF to dispose of any of the existing inventory of NSCM.

3.7.5 Determination of Overall Compatibility

Table 3-14 summarizes the findings of this evaluation with respect to using PUCDF for the demilitarization of NSCM currently stored at PUCD. The NSCM inventory, which consists of mustard DOT bottles, appears technically compatible (to some degree) with all of the technologies being considered for PUCDF. In addition, the political/public outlook appears medium-to-high, and the schedule compatibility is low-to-medium (depending on technology). The NSCM has an overall medium compatibility with whichever technology is selected for PUCDF. It is recommended that all the PUCD NSCM continue to be assessed in Stage 2 of this study to verify compatibility with PUCDF.

Table 3-14. PUCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Chemical Samples								
DOT Bottles								
PUCDF – Baseline		**M** (M,M,M)						
PUCDF – Modified		**M** (M,M,M)						
PUCDF – Cryo/Neut/SCWO		**M** (M,L,M/H)						
PUCDF – Fluid/Neut/Bio		**M** (M,L,M/H)						

H = High, M = Medium, L = Low, N = No/None
Overall rating appears first in bold followed by the three area ratings

3.8 Umatilla Chemical Depot, Hermiston, Oregon

3.8.1 Chemical Agent Disposal Facility Description and Inventories

The Umatilla Chemical Agent Disposal Facility (UMCDF), currently under construction, will dispose of the stockpile inventory at the Umatilla Chemical Depot (UMCD). UMCDF will use the baseline reverse assembly followed by incineration process.

The stockpile inventory at UMCD consists of explosively configured GB or VX projectiles and rockets and VX land mines, as well as bulk items (HD TCs, GB bombs, and VX spray tanks). The NSCM inventory consists of a small number of TCs containing GB or VX as shown in Table 3-15.

3.8.2 Technical Compatibility Analysis

UMCDF could process the UMCD NSCM inventory with some or no modifications. The technical compatibility of the NSCM inventory is summarized below.

Non-Explosive NSCM (GB, VX)—TCs. Rating: High. UMCDF has a BCHS to process TCs and incinerators to process GB and VX agents, so processing GB or VX TCs should not be a problem.

3.8.3 Stockpile Destruction Schedule Compatibility

Rating: High. The UMCDF schedule indicates the facility will complete processing of the stockpile inventory in 2005, leaving about a two-year period for additional campaigns, if necessary, to process NSCM. The TCs can be processed concurrently with rockets of like agent during a planned stockpile campaign with little or no effect on the schedule. Therefore, the processing of the non-stockpile TCs in UMCDF would not adversely affect the stockpile disposal schedule or treaty compliance.

3.8.4 Political/Public Outlook

Rating: High

Information pertaining to Umatilla was obtained from the PAO and the Outreach Office Site Manager. In addition, a press release and newspaper article (see Appendix A) discuss the position of the Morrow County Commissioners.

Table 3-15. Umatilla Chemical Depot NSCM Inventory

Non-Stockpile Inventory										
	Agent									
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other	Unknown	Total
Chemical Samples										
Ton Container	4			1						5
Total	4			1						5

Commitments. While the existing permit for UMCDF does not reference NSCM directly, it does include a provision that all chemical agents and chemical agent contaminated materials currently stored or otherwise stored at UMCD are to be processed in accordance with the permit. (This would include NSCM.) However, the stockpile materiel are also listed in the permit, while the NSCM is not. The permit would likely need to be modified for disposal of the NSCM in the UMCDF. The permit also requires the facility to be taken down when the stockpile is destroyed.

Public Acceptability. Disposing of the existing NSCM at UMCD is not an issue for state officials since the UMCDF permit already includes NSCM under the above provision. In fact, the state of Oregon does not want to spend additional time or money permitting a mobile NSCM processing unit for UMCD. They have accepted incineration and do not want to worry about assessing other "unproven" technologies. They are more concerned that no secondary hazardous wastes are left after the stockpile has been destroyed and UMCDF is dismantled.

Local officials, the mayor of Hermiston, and the CAC are strong supporters of UMCDF, and generally are more concerned about the dangers of continued storage.

In Oregon, disposal of stockpile and non-stockpile inventories is low on the list of environmental concerns when compared to range land, water rights, and pesticide usage. At a recent CAC meeting (6/15/00), the subject of NSCM was not even brought up, and there are no future plans to put NSCM on the agenda. No responses have been received following the Army's announcement of the feasibility study.

Based on the above, the political/public outlook is rated as being high for using UMCDF to dispose of the small amount of existing NSCM inventory, particularly since the existing permit allows for NSCM disposal.

3.8.5 Determination of Overall Compatibility

Table 3-16 summarizes the findings of this initial screening with respect to using UMCDF for demilitarization of NSCM currently stored at the UMCD. The five TCs could be processed as part of routine operations. In addition, the political/public outlook forecasts support for NSCM processing, and the schedule compatibility is high; therefore, overall compatibility is high. It is recommended that all the NSCM at the UMCD continue to be assessed in Stage 2 of this study to verify compatibility with UMCDF.

Table 3-16. UMCDF Overall Compatibility Ratings

Overall Compatibility (Technical, Schedule, Political/Public Outlook) Ratings								
	Agent							
Items	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Chemical Samples								
Ton Container	**H** (H,H,H)			**H** (H,H,H)				
H = High, M = Medium, L = Low, N = No/None Overall rating appears first in bold followed by the three area ratings								

Section 4

Summary and Conclusions

4.1 Conclusions

In light of legislative changes provided by Public Law 106-65, this study was initiated to determine whether there could be a cost savings to the Army (and thus to U.S. taxpayers) by processing certain NSCM items (collocated with stockpile CWM) in the local stockpile CDFs. The initial compatibility screening indicates that there is a level of compatibility between some or all of the NSCM inventory present and the current or future CDF at every stockpile site. At APG and DCD, there is also a level of compatibility between some or all of the NSCM and the other Army R&D facilities at those installations (the CTF at APG and CAMDS at DCD). While no facilities can be eliminated from consideration of NSCM processing at this time, it is recommended that a few NSCM items—explosively configured munitions at APG, non-mustard agent NSCM at APG, and L and CG munitions at PBCDF—not be further analyzed in Stage 2 of this study. Moreover, consideration of NECDF processing of VX discovered during dismantling of the former VX production facility will not be analyzed in Stage 2 because it would be highly speculative to assess non-existent NSCM. Table 4-1 summarizes the overall compatibility ratings.

It is not surprising that many NSCM items have some degree of technical compatibility with the CDFs. Many CDFs (e.g., the incineration facilities) have a fairly robust design that enables them to process a variety of stockpile munitions and agent fills. NSCM items such as sample bottles and TCs which are a result of stockpile maintenance activities have agent fills corresponding to stockpile items at that location. Therefore, some degree of technical compatibility would be expected between these NSCM items and the stockpile CDF at all sites.

The schedule compatibility screening reveals that most of the NSCM items could be processed either concurrently with stockpile munitions or at the end of a campaign without jeopardizing CWC treaty compliance. The BGCDF, PUCDF, and PBCDF stockpile destruction schedules indicate completion of operations within a few months of the treaty deadline. However, with the exception of large-quantity NSCM items, such as traktor rockets, the schedule compatibility does not negatively impact the overall compatibility ratings.

The political/public outlook varies from site to site. Generally, sites with only a few NSCM items in their inventory have a more favorable political/public outlook rating. Less difficulty is anticipated with public opinion and in modifying the CDF permit to process the NSCM in storage at those depots. At some sites with larger NSCM inventories, such as PBA and APG, the public is more supportive of non-CDF non-stockpile solutions. The political

Table 4-1. Overall Compatibility Ratings

Items	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Aberdeen Chemical Agent Disposal Facility—Aberdeen Proving Ground, Aberdeen, MD								
Munitions								
75mm projectile (explosive)		N						
4.2-inch mortar (explosive)		N			N			
4-inch (non-explosive)		M						
Chemical Samples								
30-gallon drum	N	M		N				
5-pint can		M		N				
5-gal bucket		M		N				
Multi-pack bottles, vials	N		N					
55-gallon drum		M						
0.5-gallon can		M		N				
Ton container	N			N				
15-gallon container	N							
DOT bottle	N							
Bottle	N							
Chem. Agent Ident. Sets (CAIS)								
K955		M	N					
K955, Chloroacetophenone (CN)								N
Adamsite (DM)								N
Chloropicrin (PS)								N
Triphosgene (TP)								N
Chemical Transfer Facility—Aberdeen Proving Ground, Aberdeen, MD								
Munitions								
75mm projectile (explosive)		N						
4.2-inch mortar (explosive)		N			N			
4-inch (non-explosive)		H						
Chemical Samples								
30-gallon drum	H	H		H				
5-pint can		H		H				
5-gallon bucket		H		H				
Multi-pack bottles, vials	H		H					
55-gallon drum		H						
0.5-gallon can		H		H				
Ton container	H			H				
15-gallon container	H							
DOT bottle	H							
Bottle	H							
Chem. Agent Ident. Sets (CAIS)								
K955		H	H					
K955, Chloroacetophenone (CN)								H
Adamsite (DM)								H
Chloropicrin (PS)								H
Triphosgene (TP)								H

H = High M = Medium L = Low N = No/None

Table 4-1. (Continued)

Items	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Anniston Chemical Agent Disposal Facility—Anniston Army Depot, Anniston, AL								
Chemical Samples								
Vial	M							
DOT bottle		M		M				
Ton Container	H							
Blue Grass Chemical Agent Disposal Facility—Blue Grass Army Depot, Richmond, KY								
Chemical Samples								
DOT bottle		M		M				
Ton container	M							
Tooele Chemical Agent Disposal Facility, Tooele, UT								
Items at Deseret Chemical Depot, Tooele, UT								
Chemical Samples								
Miscellaneous containers		M						
Ampoule	M							
Ton container		H						
Chem. Agent Ident. Sets (CAIS)								
K953, K941		M	M		L			
Cyanogen chloride (CK)								L
Ethyl malonate (GS)								M
Nitrogen Mustard (HN)								M
Items at Dugway Proving Ground, Dugway, UT								
Munitions								
4.2-inch mortar (explosive)		H	L					
105mm projectile (explosive)		H	L					
155mm projectile (explosive)	H							
T77 155mm projectile (explosive)	M							
6-inch projectile (explosive)	M							
M125 Half bomblet (explosive)	M							
155mm (non-explosive)	H							
4.2-inch (non-explosive)		H						
M139 Half bomblet (non-explosive)	M							
Chemical Samples								
Containers, bottles, vials	M	M	L	M				
Bottles (EA-1699)								M
Chemical Agent Munitions Disposal System, Tooele, UT								
Items at Deseret Chemical Depot, Tooele, UT								
Chemical Samples								
Miscellaneous containers		M						
Ampoule	M							
Ton container		M						
Chem. Agent Ident. Sets (CAIS)								
K953, K941		M	M		L			
Cyanogen chloride (CK)								L
Ethyl malonate (GS)								M
Nitrogen mustard (HN)								M
Items at Dugway Proving Ground, Dugway, UT								
Munitions								
4.2-inch mortar (explosive)		M	M					
105mm projectile (explosive)		M	M					
155mm projectile (explosive)	M							

H = High M = Medium L = Low N = No/None

Table 4-1. (Concluded)

Items	Agent							
	GB/GA/GD	HD/HT/HS	Lewisite	VX	CG	DF	QL	Other
Chemical Agent Munitions Disposal System—Dugway Proving Ground (Concluded), Dugway, UT								
Munitions (concluded)								
6-inch projectile (explosive)	M							
M125 Half bomblet (explosive)	M							
155mm (non-explosive)	M							
4.2-inch mortar (non-explosive)		M						
M139 Half bomblet (non-explosive)	M							
Chemical Samples								
Containers, bottles, vials	M	M	M	M				
Bottles (EA-1699)								M
Pine Bluff Chemical Agent Disposal Facility—Pine Bluff Arsenal, Pine Bluff, AR								
Munitions								
4.2-inch mortar (explosive)		L	N		N			
150mm traktor rocket (explosive)								L
75mm projectile (explosive)		L						
200mm Livens projectile (explosive)		L			N			
M70A1 bomb (explosives unknown)		M						
75mm projectile (non-explosive)		M						
4-inch cylinder (non-explosive)		M						
Chemical Samples								
Ton container	H							
Ton container (empty, previously L)								M
Lab sample				H				
Vial			L					
Chem. Agent Ident. Sets (CAIS)								
Mustard (H/HD/HS)		M						
Lewisite (L)			L					
Chloropicrin (PS)								M
Phosgene (CG)					L			
Chloroacetophenone (CN)								M
Adamsite (DM)								L
Triphosgene (TP)								M
Cyanogen chloride (CK)								L
Ethyl malonate (GS)								M
Nitrogen mustard (HN)								M
Binary								
M20						L		
Drum						L	M	
Box, container, can							M	
Pueblo Chemical Agent Disposal Facility—Pueblo Chemical Depot, Pueblo, CO								
Chemical Samples								
DOT Bottles		M						
Umatilla Chemical Agent Disposal Facility—Umatilla Chemical Depot, Hermiston, OR								
Chemical Samples								
Ton Container	H			H				

H = High M = Medium L = Low N = No/None

outlook survey indicates that at all sites some of the public is concerned about processing any NSCM for fear that it would result in NSCM from other states being transported to their local CDF.

4.2 Next Steps

Analysis will continue on those NSCM items and stockpile disposal facilities that have some degree of compatibility. Detailed assessments of the processing of NSCM items in a stockpile facility will be performed with respect to technology, cost, public acceptability, schedule risk, and environmental permitting issues. Some of the NSCM items will then be selected for further analysis in comparison to other PMNSCM processing schemes not examined in this study. Although the final determination of compatibility cannot be predicted, NSCM items that are rated as having a low or medium compatibility in this initial screening study are more likely to be judged incompatible in subsequent levels of detailed analysis.

Appendix A

Political/Public Outlook

Program Manager for Chemical Demilitarization

DEPARTMENT OF THE ARMY
PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION
ABERDEEN PROVING GROUND, MARYLAND 21010-5401

June 1, 2000

Dear Stakeholder:

This letter is to notify you about our plans to respond to a recent congressional requirement that may have an impact on the chemical demilitarization program. It is important that you be aware of this requirement so that you can provide feedback and comments to the Army before a response is prepared for Congress.

The National Defense Authorization Act for Fiscal Year 2000, which became Public Law 106-65 on October 5, 1999, provides that non-stockpile materiel may be disposed in stockpile disposal facilities if the State in which the facility is located issues the appropriate permit or permits. The law also directs the Department of Defense to assess the current chemical demilitarization program for the purpose of reducing cost and ensuring compliance with the Chemical Weapons Convention. In House Report 106-616, to accompany H.R. 4205, the National Defense Authorization bill for Fiscal Year 2001, the House Armed Services Committee expressed the belief that these issues must be addressed and serious consideration given to destruction of non-stockpile materiel in stockpile disposal facilities, before the Army proceeds further with the development and acquisition of transportable treatment systems for non-stockpile chemical materiel.

Based on this Congressional direction, the Army is initiating an assessment of the feasibility of destroying non-stockpile chemical materiel (currently recovered) in the chemical stockpile disposal facilities. The Army will prepare this assessment in two parts:

- Part I will be a letter report (Interim Report) which will be delivered to Congress within 60 days (due July 31, 2000). The report will examine each chemical agent disposal facility and determine whether it can destroy non-stockpile materiel in the facility and whether doing so would produce a cost saving to the government. The report will also identify facilities where there is no advantage to destroying non-stockpile materiel. In addition, the report will identify those sites where it cannot be determined (in 60 days) whether the facility could destroy non-stockpile materiel. The report will also include any public input to this issue received before July 15, 2000. (Because of the short suspense, we recognize that we may not receive many public comments at this time. However, we wanted to provide as many opportunities as possible for public comment on this important issue.)

- Part II will be a longer report (Final Technical Report) which will be delivered to Congress within 180 days (due November 30, 2000). The report will address all issues that require further study and that are not addressed in the Interim Report. The report will also include public input to this issue received before September 15, 2000.

It is emphasized that this is a feasibility study. Before any federal action is contemplated, an environmental analysis will be conducted under the National Environmental Policy Act. If you have any written comments you would like to provide on this issue to be included in the Army's Interim Report response to Congress, please provide them before July 15, 2000 to:

U.S. Army Program Manager for Chemical Demilitarization (PMCD)
Building E4585, ATTN: SFAE-CD-P
Aberdeen Proving Ground; MD 21010-4005

If you would like to wait until you have had a chance to examine the Interim Report, you can provide comments to the Army at the above mentioned address by September 15, 2000 to have them included in the Final Technical Report.

As soon as the Interim Report has been delivered to Congress, copies will be provided to the local Chemical Stockpile Community Outreach Offices and placed on the PMCD Web page for public review. If you would like to have a report mailed to you, call (800) 488-0648. Or in Alabama call (256) 238-0120; in Arkansas call (870) 534-4901 or (870) 247-2025; in Colorado call (719) 549-4877; in Indiana call (765) 492-4445; in Kentucky call (859) 626-8944; in Maryland call (410) 676-6800; in Oregon call (541) 564-9339; and in Utah call (435) 882-3773. The PMCD Web site is www-pmcd.apgea.army.mil.

James L. Bacon

JAMES L. BACON
Program Manager for
Chemical Demilitarization

Aberdeen Proving Ground

MARYLAND CHEMICAL DEMILITARIZATION CITIZENS' ADVISORY COMMISSION

Address communications to:
P.O. Box 141, Worton, Md. 21678

July 11, 2000

Mr. James L. Bacon
U.S. Army Program Manager for Chemical Demilitarization (PMCD)
Building E4585, ATT: SFAE-CD-P
Aberdeen Proving Ground. Md. 21010-4005

Re: Interim Report on feasibility of destroying non-stockpile chemical materiel in the chemical stockpile disposal facility

The Md. Citizen's Advisory Commission met in June 2000. The Commission discussed your request for comments regarding the feasibility study now being undertaken by PMCD. The consensus was that the APG demil facility should not be used to destroy non-stockpile chemical materiel.

This Commission has been repeatedly told by representatives of PMCD and Congress that the Aberdeen facility will be used only to destroy the stockpile of ton containers of mustard stored at APG. Concern exists in the community that the facility at Aberdeen once built will not be dismantled. Based on representations made to our community by the Army and members of Congress, the possibility that Aberdeen's facility is being considered to dispose of non-stockpile materiel from other sites is unconscionable . If chemical weapons from other sites are brought to Aberdeen and destroyed, then the Aberdeen community will be exposed to even greater risks. The Commission finds this scenario totally unacceptable.

The PM Non-stockpile is constructing a MAPS facility to dispose of non-stockpile materiel found at APG. The hearing for the permit will be in July of 2000. This facility will be designed to handle explosive rounds, something the planned demil facility is not designed to do. Thus, Aberdeen's non-stockpile problem is already being addressed.

The Commission thanks you for allowing our input and looks forward to receiving a copy of both the interim and final report. Please feel free to contact us should you have any questions concerning our position.

John E. Nunn, III
Md. CAC

cc: Sen. Paul Sarbanes
Sen. Barbara Mikulski
Rep. Robert Ehrlich
Rep. Wayne Gilchrest

Anniston Army Depot

Speak Out

by Our Readers
04-10-2000

The U.S. Army just won't give up and play by the rules. It is bound and determined to use Calhoun County as its poison gas testing and dumping ground.

The citizens of Calhoun County told the U.S. Army to build the chemical weapons incinerator and when finished, tear it down. If we ever make the smallest concession to the Army on the poison gas disposal issues, we will be the losers.

The final poison gas incineration plan was approved by U.S. Rep. Bob Riley, other elected officials of Calhoun County and numerous organizations. The final disposal plan stated that the incinerator would be built, utilized and when the last drop of gas was incinerated, it would be torn down.

The agreement also stated that no offsite poison gas would be transported to Calhoun County for incineration. It also stated that only poisonous gas stored at the Depot would be incinerated.

Where do politicians stand? If they are for the people, let's hear from them. If they are for the Army we would like to know that also. Remember this, the Army pulled out of Calhoun County and moved to Missouri. If it wants to test alternate methods of gas disposal, do it somewhere else — how about Fort Leonard Wood, Mo?

The Army is like a battering ram. It keeps pounding and coming at you until you bend and break. These battle tactics will continue to be pushed down our throats until the incinerator is built, used and demolished. We also have to remember that if we want Calhoun County to grow and flourish, we have to attract clean industries and new citizens. I doubt very much if new industry or citizens would want to settle in/around a poisonous gas/toxic dumping ground.

Let's tell the director of ACWA (Army's Assembled Chemical Weapons Program), to take this pilot program and ideas somewhere else and leave us alone.

Richard Snyder

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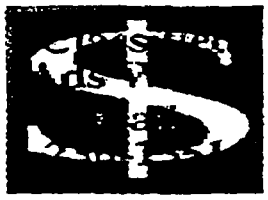

The Anniston Star News

Incineration facilites target of Army study

by Russ Henderson
06-05-2000

In 1997, the Army assured Anniston residents non-stockpile weapons wouldn't be destroyed at the incinerator under construction at the Anniston Army Depot.

It's possible that promise may be broken.

Congress made it legal last year to transport non-stockpile chemical weapons over state lines and to burn them in the Army's chemical weapons incinerators.

This week, the Army announced it is conducting a study of destroying the United States' non-stockpile chemical weapons using the incineration technology being used to destroy its regular weapons stockpile.

The difference between a stockpile chemical weapon and a non-stockpile weapon has to do with a treaty. The 1995 international Chemical Weapons Convention treaty froze the size of the nation's stockpile at 31,495 tons.

Non-stockpile chemical weapons are those that have been discovered or dug up from old firing ranges, former production facilities and outdated "disposal" sites since the treaty.

The Anniston Army Depot stores 1,567 pounds of non-stockpile weapons it has no way to destroy. The study now under way may mean even more non-stockpile weapons could be shipped to the Anniston site for destruction.

Rep. Bob Riley, R-Ashland, said Thursday he would oppose any effort by the Army to burn non-stockpile weapons here.

"It is not what the community was promised," Riley said. "I will fight any attempt to burn anything but the depot's stockpile out there."

In October 1999, the Defense Authorization Act for fiscal year 2000 was passed, and in it was a new law allowing non-stockpile weapons to be burned and transported across state lines. It's still illegal to transport the regular stockpile over state lines. The legislation came

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out of the House Armed Services Committee, which Riley serves on.

Riley said he approved the legislation not for Anniston, but for incinerator communities like those in Tooele, Utah; Umatilla, Ore., and Pine Bluff, Ark., that are interested in extending the lives of their incinerators to burn non-stockpile weapons. He approved the present study to be conducted for the same reason, he said.

The Army's non-stockpile program originally was to use an alternative to incineration called neutralization. The neutralization technology is still under development.

Congress has now directed the program to see if using the main-line incineration program instead would save the government money.

"What Congress has done is asked us to bump our program up against the incineration program to see if a cost savings comes out of it," said Charles Heyman, deputy project manager for the Army's office of Non-Stockpile Chemical Materiel in Maryland.

The study also will identify the sites where burning the weapons will be most practical, taking logistical and political factors into consideration. One site may be a practical location, close to sites where tons of the weapons are suspected of being buried, Heyman said. That same community may not be very receptive to the idea of extending the life of its incineration facility, though.

The Army has promised every community with an incinerator that once the stockpile has been eliminated, the incinerators will be dismantled.

The first draft of the study, an "interim report," is due within 60 days of June 1. It will examine each chemical agent disposal facility and determine whether non-stockpile material could be destroyed there and whether it will present a cost savings to the government. A "technical report" will be due Nov. 30 that will address issues that require further study and couldn't be resolved in the interim study.

The study may be making a tall order, though, Heyman said. Destroying non-stockpile weapons in a facility built for stockpile weapons may sound easy, but it's not.

"Stockpile weapons have been kept in almost pristine condition by comparison," Heyman said. "We're talking about stuff that may have been buried for decades and is almost falling apart from corrosion."

The incineration facilities are outfitted to disassemble munitions in good condition, he said. If they're not in good condition, new ways have to be found to disassemble or cut up the munitions, and that could get expensive, Heyman said.

Non-stockpile chemical materiel also covers a variety of objects, he said — from bombs to vials to machinery. The many shapes and sizes of the objects present another engineering obstacle.

"The robots and machines in an incinerator are built to accommodate just a few configurations – rockets, munitions and ton containers," he said. "Here, you're dealing with possibly dozens of configurations."

Non-stockpile weapons that are currently known to exist fall under the 1995 treaty that requires that all chemical weapons be destroyed by 2007. More than seven tons of the material exists nationwide, discovered in 224 sites across 38 states, the District of Columbia, the Virgin Islands and Guam.

It is not known, however, how many tons of non-stockpile chemical materiel may be discovered.

A 1993 survey and analysis report on the non-stockpile chemical materiel program estimated that destruction of buried chemical warfare materiel might take all the way to the year 2034 — far beyond the 2007 deadline.

The entire program would cost $17.7 billion over the next 40 years, the report said.

"That's an expanded estimate, though," Heyman said. "Our program has been narrowed by the Department of Defense to a 2007 time frame."

The current program is funded by $1 billion through 2007.

Rules of incineration: Congress and the Army

by Our Opinion
06-06-2000

ONE OF the most important reassurances the Army has given us in the past is that after the incinerator is built and after the chemicals weapons at the Anniston Army Depot are destroyed, the thing will be torn down.

Stray from that plan one little bit and you are asking for trouble. Because this community will not stand for uncertainty. We want an ironclad promise that chemical weapons will not be trucked in from anywhere outside the depot and that incineration will not go on for years. The Army knows that. Congress knows that.

But there are disturbing moves afoot that could allow chemical weapons to be trucked in from the outside. And that we simply will not tolerate.

This has all come about because other communities in the nation that are home to incinerators have asked to be able to burn non-stockpiled weapons and to accept weapons from elsewhere. That's fine if they want to do that. But don't send any of it our way.

The Army is conducting a study that will look at the financial and political costs of burning non-stockpile weapons. The 1997 international Chemical Weapons Convention treaty only addressed the 31,495 stockpiled tons around the nation. It did not address the seven tons of known non-stockpiled weapons, ones that have been dug up from firing ranges or discovered in other places.

It makes sense, of course, to burn this stuff up, too. The trouble comes in when you apply this study to legislation passed last year that allows non-stockpiled chemical weapons to be transported over state lines. Does this mean that some of that seven tons of dangerous stuff could be sent to Anniston?

The Anniston Army Depot has some 1,567 pounds of known non-stockpiled weapons. Again, it makes sense to get rid of this too, but not if it means we will have to accept tons of weapons from other places.

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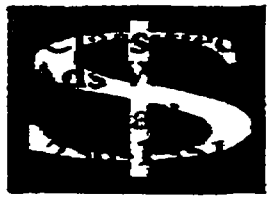

What needs to be done then, is for Rep. Bob Riley to find a way to write us out of this deal. He needs to draw up some crystal clear legislation that will make it impossible to ship any chemical weapons to the depot. It should say that only the chemical weapons located within the boundaries of the Anniston Army Depot will be destroyed at the incinerator.

Rep. Riley should not, under any circumstances, allow this question to fester. Otherwise, who is to say that we will not be burning chemical weapons from all over the place.

Blue Grass Army Depot

Clipping provided by the Blue Grass Chemical Stockpile Outreach Office.
117 East Main Street
Richmond, KY 40475
phone: (606) 626-8944

The Richmond Register
Page A1
Saturday, June 10, 2000

Non-stockpile weapons key to new study

by KARLA DOOLEY
Register News Writer

The fate of two small bottles of mustard gas, one bottle of VX nerve agent and a ton container of GB nerve agent stored at the Blue Grass Army Depot could be determined by the results of a new study authorized by Congress.

The study will focus on what should be done with chemical materials that are not considered a part of any Army stockpile and, more specifically, whether it would be feasible to destroy those materials at plants that are located or are being built at the country's eight stockpile locations.

Until now, the government had leaned toward destroying non-stockpile materials with mobile units developed under the Army's wide-sweeping Program Manager for Chemical Demilitarization, said Cathy Herlinger, a public affairs officer for the PMCD effort.

Dave Easter, public affairs official for the depot, said the idea of using mobile technology to destroy non-stockpile chemical materials is very expensive.

But Craig Williams of Berea, who is the director of the Chemical Weapons Working Group, said the implications of the study are much more far-reaching for Madison County than simply determining what will be done with those four items at the depot here.

"Congress clearly has broken faith with the communities that store these chemical weapons," he said. "The deal was, these (destruction plants) are to be built, the stockpile disposed of, and these things to be torn down ... That insurance policy has now been voided."

Williams said that if the study reveals it would be more financially practical to destroy non-stockpile materials at stockpile sites, the door might be opened for the Blue Grass Army Depot to take in chemical weapons from surrounding areas.

The bottles of mustard and nerve gas and ton container of nerve agent stored at the Blue Grass Army Depot are the only known non-stockpile munitions in the state, said Bill Brankowitz, deputy product manager for Non-stockpile Chemical Materials.

However, he said the Army has not ruled out the possibility that leftovers from chemical testing and training could be buried at the depot or at Fort Knox.

"We don't know that there's anything there, but it's a little suspicious," Brankowitz said.

Brankowitz said the known nerve and mustard items stored at the depot are not included with the stockpile inventory because they are left over from earlier demilitarization efforts.

"These things ended up financially marooned," he said.

Items classified as non-stockpile material can include chemical agent identification kits that were once issued to armed forces units but have since been disposed of, munitions that have been recently discovered, or chemical agents left over from earlier demilitarization programs, according to information suppled by Blue Grass Chemical Activity.

300 Center St.
Berea, Ky 40403
606 985-0022
Sun, Jun 11, 2000

U.S. Army Program Manager for Chemical Demilitarization (PMCD)
Building E4585, ATTN, SFAE-CD-P
Aberdeen Proving Ground, MD 21010-4005

I wish to provide the following comments for the Army's Interim Report to Congress on destroying non-stockpile materiel in stockpile disposal facilities.

I urge you to consider the issue of public trust in evaluating the feasibility of further use of stockpile disposal facilities.

In central Kentucky stockpile disposal has been a significant public issue for well over a decade. From the beginning there was significant public concern about the potential for further use of a disposal facility. From the beginning local citizens have been assured that the Army planned no further use. For much of this time we have been assured that national legislation prohibited further use. These assurances, and the continuing public concern, are well documented and well known.

For Congress (and the Army) now to consider further use violates those historic and repeated assurances. I urge you to consider how repudiation of those assurances would effect public confidence in the Army and in the Government.

I also urge you to consider the time and cost of validating, modifying, and re-permitting stockpile disposal facilities for non-stockpile materiel.

It should be clear that stockpile disposal facilities cannot handle initial treatment of non-stockpile materiels. Non-stockpile materiels include old, uncataloged, diverse, potentially unstable items located far from any potential stockpile disposal facility. They will require on-site evaluation and stabilization before transport. Stockpile facilities are not designed to process many non-stockpile items nor to process small quantities of diverse items.

At most, stockpile facilities could only handle secondary treatment of non-stockpile wastes. However non-stockpile items include different chemicals (such as Lewisite and Phosgene) requiring different initial treatment. Results of this initial treatment will include waste chemicals (such as Arsenic) not envisioned nor evaluated during development of stockpile disposal facilities. Disposal of these secondary waste streams would require re-validation, possible modification, and repermitting of the stockpile facilities.

In contrast, the non-stockpile program is currently identifying transportable secondary treatment processes for use on-site. Preliminary indications are that several of these secondary processes can be developed quickly at reasonable cost. These processes would allow non-stockpile items to be completely destroyed on-site (eliminating transportation risks), in facilities developed specifically for the purpose, and with reduced permitting problems.

Sincerely yours,

Douglas Hindman

CITY OF BEREA
MAYORS OFFICE

CLIFFORD F. KERBY, M.D.
MAYOR

212 CHESTNUT STREET, BEREA, KENTUCKY 40403
(606) 986-8528
T.D.D.# 1-800-648-6057

12 June 2000

U.S. Army Program Manager for Chemical Demilitarization (PMCD)
Building E4585, ATTN: SFAE-CD-P
Aberdeen Proving Ground, MD 21010-4005

Subject: Comments for Interim Report for Destruction of Chemical Weapons Stored at Blue Grass Army Depot in Kentucky

Dear Sirs:

I would like to enter my personal comments on the above subject for the Interim Report. I am a life long resident of Berea, Kentucky, a city located about 6 miles south of BGAD. I have been this city's mayor for 22 years. I have a Doctorate degree in Medicine and a college major in chemistry. For about seven years I served as chairman of a local committee established by Congressman Larry Hopkins to objectively study the options of removing the chemical weapons in our area (to wit: about 70.000 M55 rockets loaded with VG or GB). I have testified in Congressional hearings both in Washington and locally. The committee in it's final report to Congressman Hopkins enumerated it's three options as follows:

1. Move the rockets to a safer place for destruction. It became obvious that option was "politically' killed by lack of votes from states not having chemical weapons. No one wanted the weapons "through or over their state."

2. Destroy the weapons on site (our second choice, but probably our only one).

3. Let the weapons stay stored. (Not really a realistic choice due to the increasing danger produced by these deteriorating rockets.)

Since that time I have watched costs escalate astronomically, study after study, meeting after meeting, rocket leaker after rocket leaker, and still 70,000 rockets are lying there 6 miles away.

During the past 15 years, this community and the surrounding county have experienced an unbelievable growth in both industry and population. Unemployment is below 2%. Times are good. It is now time to stop the studies and the rhetoric and get down to the business that must be taken care of, namely, destroy these rockets!

Although a vocal minority has fought the incineration of these weapons for years, I feel that the majority of citizens in this area are ready for the process to proceed using the known effective and safe method we already have - incineration. If an alternative method that is just as safe could be found, that would be fine, but so far there isn't one and it would take years to develop and evaluate any new method. I don't believe this area needs to live with the potential for disaster for more years of arguing and spending.

I would like to emphasize that this is not an official statement for the Berea city government, but is my personal view. I can assure you, however, that it is a view shared by many residents of Madison county.

Sincerely

Clifford F. Kerby, MD

Deseret Chemical Depot

Public Comments to the United States Congress
Interim Report – Non Stockpile disposal issue
Program Manager for Chemical Demilitarization
Building E4585, ATTN: SFAE-CD-P
Aberdeen Proving Ground, Maryland 21010-4005

Dear Sir/Ms; 14 June, 2000

I would like to provide input/public comment on the issue of disposal of non-stockpile chemical weaponry in existing stockpile disposal facilities. I would appreciate my input being included in the Army's interim report to Congress.

My name is Roger Grenier and I have worked at the Tooele, Utah chemical weapons disposal facility (TOCDF) since 1991. I performed Quality oversight for the mechanical installation during the construction phase of the plant, and have been involved in the maintenance of this facility ever since. I know from first-hand experience how well built and maintained our plant is.

The materials/alloys used in the construction of our plant, and the engineered redundancy and backup systems are several orders of magnitude more robust than those found at a comparable commercial chemical plant, as are the standards of our maintenance. It would be the zenith of fiscal irresponsibility to decommission/destroy this facility upon completion of our current mission, as the law currently requires. As a citizen and taxpayer, I must strongly resist such a waste of valuable resources. This plant is built. It is paid for. It works well, and has the potential to continue doing so for a very long time. When our current mission is complete, it will still be in excellent condition. Our workforce is trained and experienced. To simply walk away from/destroy this valuable national resource would be a travesty.

The reason that I and many of my co-workers want to work in this program is that we believe in what we are doing. For us, it is much more than just a way to earn a living. We know that we are performing a valuable service to our Nation and the environment. We are using our technical acumen and experience to rid the environment of very detrimental materials. We consider ourselves pro-active environmentalists. Some of our opponents are quite vocal about the technology used, but it (incineration) was chosen for the very reason that it is proven, and works very well. Of the technical disciplines involved at our facility, there is a wealth of experience in building, maintaining and operating incineration based facilities. This would not be the case in emerging technologies – however promising they appear in theory or in pilot/small scale plants.

For the aforementioned reasons, I respectfully request the members of Congress that are involved with this issue consider what a valuable resource existing demilitarization facilities are to our environment and Nation, and to utilize them wisely in the future to further improve the environment. Thank you for your time and consideration.

Roger N. Grenier
Tooele, Utah

More chemical weapons coming to Tooele burner?

15 June 2000 - Tooele Transcript-Bulletin - by Jeff Schmerker - For several years the Army has been testing mobile chemical weapons decontamination chambers which, when completed, would travel from state to state and clean the chemical agent-filled projectiles which have been abandoned on bombing ranges or forgotten on depots. But now, Congress has ordered the Army to study alternatives to those mobile decon units. For more information on this posting, contact Clint Warby at the Tooele ORO at 1-800-471-1617.

Posted 16-Jun-00 by Clint Warby

More chemical weapons coming to Tooele burner?

by Jeff Schmerker Staff Writer

For several years the Army has been testing mobile chemical weapons decontamination chambers which, when completed, would travel from state to state and clean the chemical agent-filled projectiles which have been abandoned on bombing ranges or forgotten on depots. But now, Congress has ordered the Army to study alternatives to those mobile decon units. The Non-stockpile Chemical Materiel Program will investigate to see if it might not be easier and cheaper to simply take the bombs to chemical weapons incinerators, like the one in Tooele County, and dispose the weapons there. Actually, Congress slashed that agency's budget and chided the group for not conducting the study earlier. In October 1999, the Defense Authorization Act for fiscal year 2000 was passed. The act contained a new law allowing non-stockpile weapons to be burned and transported across state lines. Transporting the regular stockpile over state lines remains illegal. More than seven tons of the non-stockpile material exists in 224 sites across 38 states, plus the District of Columbia, the Virgin Islands and Guam. More non-stockpile chemical materiel may still be discovered. The weapons are regulated by the 1995 international Chemical Weapons Convention treaty, which froze the size of the nation's stockpile and called for chemical weapons destruction worldwide. Some of these weapons are virtually identical to the weapons now being destroyed at the Tooele chemical weapons incinerator, while others are relics dating to World War I. Weapons identical to those now being destroyed could easily be taken to incinerators like those in Tooele and burned up, said Bill Brankowitz, the deputy product manager for non-stockpile chemical materiel, based in Aberdeen, Md. But for other weapons, the incinerators may have to be significantly altered, he added, and no one yet knows the cost or level of involvement required to pack the weapons up and ship them to burners. The Army's non-stockpile program originally was to use an alternative to incineration called neutralization. The decontamination systems - Mobile Munitions Device, Version 1 and the Rapid Response System - are trailers which can be driven directly to where the munitions lie. The MMD system is being built and tested at Dugway Proving Ground. The study - an interim report will be ready by August and a technical report is due out Nov. 30 - will also identify the sites where burning the weapons will be most practical as well as gauge support from stockpile communities faced with accepting more chemicals. And that is what, in the end, may be the program's greatest obstacle. "It is a broken promise," said Jason Groenewold, director of Salt Lake City-based Families Against Incinerator Risk. "We were promised that the burner would be immediately taken down after the stockpile is destroyed. Once again we see that they are gong back on their word - as if 27 million pounds (of chemical weapons in Tooele County) wasn't enough." Even those supportive of burning chemical weapons may oppose the notion of bringing more to Tooele, Groenewold theorized. "To me this is just another piece to the puzzle," he said, "where the Army says one thing and then we find out it's considering doing just the opposite." But the ordered study does not necessarily mean the mobile decon program will be ditched, cautioned Brankowitz. Many of these range-recovered weapons are so fragile that transportation might be nearly impossible, he said, and the non-stockpile label includes

more than the old bombs - vials, test kits and assorted machinery. Engineers might have to come up with new ways to disassemble the materials and send them through an incinerator. "There are some advantages to a possible move," said Brankowitz, giving one example: Deseret Chemical Depot has 6,398 mustard-filled ton containers, he said, and one identical ton container which is labeled non-stockpile. Only paperwork distinguishes the two munitions, but if allowed the single ton container could be destroyed along with the others. "This allows us to look at things that make sense," he continued. "The intent of the public law is to allow us to do things on site like ton containers that makes sense." Brankowitz said the Army would continue to develop the mobile decon systems until ordered to stop, and if ordered to stop the project would not be completely abandoned but rather mothballed. He also added that community feelings, not just economics, would be part of the study. "If we get very negative reactions from citizens, that would indicate the mobile systems may be the best alternative," he said. "When we start dealing with other situations where we start bringing in things from other places, whether or not they save money becomes less clear."

Families Against Incinerator Risk
165 S. Main St. Salt Lake City, UT 84111 (801) 364-5110
www.fair-utah.org comments@fair-utah.org fax 364-5110

July 15. 2000

Mr. James Bacon
U.S. Army Program Manager for Chemical Demilitarization
Building E4585, ATTN: SFAE-CD-P
Aberdeen Proving Ground, MD 21010-4005

On behalf of Families Against Incinerator Risk (FAIR), I would like to provide the following comments on the feasibility of destroying non-stockpile chemical weapons at stockpile facilities. I would ask that this be included in your interim report to Congress which is due on July 31, 2000.

The citizens of Utah were assured that the chemical weapons incinerator would be dismantled immediately after the destruction of our stockpile was completed. We were told that no other military waste would be processed at this facility, and we continue to rely on those assurances that this will in fact be the case.

We understand that Congress has asked the Army to look at the feasibility of using our incinerator to destroy stockpile material through Public Law 106-616. We do not support the use of our incinerator to destroy non-stockpile material for several reasons, and we have the following questions regarding this proposal:

1) Would destruction of the main stockpile be interrupted in order to handle non-stockpile material? If so, this would cause delays in disposal of the chemical weapons already stored in Utah, which by the Army's assessment would unacceptably increase the risk to our local community. If we are told that the risk of storage is negligible while non-stockpile material is destroyed, then we would like a new quantitative risk assessment done to look at the real risks of storage. We would expect that this new assessment would compare storage to incineration as well as to using alternatives developed under the Assembled Chemical Weapons Assessment Program (ACWA) since two technologies have been successfully demonstrated.

2) Would the incinerator have to be reconfigured each time non-stockpile material is brought to the incinerator? Is the equipment in place to allow for easy reconfiguration?

3) We would expect that trial burns would be done on each type of munition and agent that is brought to the incinerator. We would expect that this test would reflect a worse case scenario. This would be important as field munitions are in a different condition than stockpile munitions and it seems unlikely that they could be considered as identical waste streams.

4) What risk will there be to employees who handle these munitions? Will the munitions be transported across the country before being neutralized? What are the transportation risks of sending unstable

non-stockpile material across our highways and rail-lines? Will the Army have hearings in each of the communities that non-stockpile material will travel through to make sure that they are informed and included in this decision? Will the Army train medical responders in each of the communities on how to deal with shipment of this waste through their communities? Is the Army going to support Hazmat teams in the communities that this waste will be shipped through?

5) Will the Army conduct a NEPA study to determine if transporting these munitions across the country and disposing of them in incinerators is safer than using one of the alternatives that have been tested in the non-stockpile disposal program?

6) Will the Army change-out each of the carbon filter beds in the HVAC system for each type of agent that is destroyed each time that a new agent is brought to the facility? If not, how does the Army propose monitoring the destruction of the carbon filters at the facility to ensure that agent does not escape into the environment? Will the Army calibrate the ACAMS and DAAMS tubes for each type of agent and change the lab set-up to deal with various kinds of agent? Again, will this happen each time that a new agent type is destroyed at the incinerator?

7) Is the Army going to store non-stockpile material at stockpile sites until the stockpile is destroyed? If so, what risk will occur from storage of these weapons? What time frame would the Army expect to start destroying non-stockpile munitions? Have you accounted for delays in the disposal program? Will non-stockpile material be left in place until a stockpile site is finished destroying its entire stockpile and other waste that is on site? If so, what is the continued risk of leaving non-stockpile material in place?

8) Has the Army figured out how many people would be unemployed if the MMD-1, MMD-2, and RRS programs are let go? This is a factor that is important to our community. What will be lost in resources and technology if these alternatives are abandoned?

9) Has the Army considered what resistance may occur from transporting non-stockpile material through communities and what affects this may have on disposal schedules? Have they accounted for terrorist attacks on shipping this waste?

10) Has the Army considered what affects bringing non-stockpile material to stockpile disposal sites may have on its credibility and public image? Stockpile communities were assured this very thing would not happen, yet by merely considering this, it already increases the levels of distrust that are present amongst citizens.

We look forward to hearing your response to these questions. We certainly hope that you will include these comments and concerns in your report to Congress on the 31st of July. We would also ask that you include these in your final report. Please let Congress know that we do not support the transportation of non-stockpile material through our communities, and we do not support destruction of non-stockpile material in the Utah incinerator. Moving forward with the alternative technologies would be best for everyone involved.

Sincerely,

Jason Groenewold
Director, FAIR

Newport Chemical Depot

No items received.

Pine Bluff Arsenal

PINE BLUFF COMMERCIAL
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Pine Bluff Commercial archives

May 01, 2000

FEASIBILITY STUDY ORDERED ON BURNING MATERIAL

By Jennifer Baker/OF THE COMMERCIAL STAFF

The destruction of old unused military equipment and munitions as well as some chemical warfare at a stockpile incinerator will now be studied, according to a bill passed by Congress.

Boyce Ross, program manager for chemical demilitarization at the Pine Bluff Chemical Agent Disposal Facility, made the announcement during a Citizens Advisory Commission meeting Tuesday evening. "A company called Mitretek Systems has been hired to do the study - basically the Army is just complying with the direction of the armed forces," he said.

Once the study begins, a report will be made in 60 days as to what has been determined to that point. The final report will be given on Nov. 30.

If the study decides to incinerate the recovered discarded materiel, the Pine Bluff Arsenal and Tooele, Utah, are the only two incinerator sites that have permits to accept recovered chemical warfare.

Jeff Lindblad, spokesman for the Pine Bluff Chemical Agent Disposal Facility, said any nonstockpile materiel has to be stored somewhere safe. "We can't just dump them in an incinerator - some of these weapons have been in the ground since World War II. What about buried tanks, or what about a 75mm shell that is 75 years old and is accidentally bumped - we have no way of knowing what kind of condition the fuses of these weapons would be in."

Burning any nonstockpile materiel would take a completely different handling procedure, Lindblad said. "Those type of configurations do not match what we have at our facility. I'm concerned these incinerators were not made for nonstockpile materiel."

Joe Daven, site manager for the Arsenal's nonstockpile, said the study will probably find it's not feasible to incinerate it. "It's a tremendous amount of cost with the development and research - I believe Congress will find it economically unfeasible."

PINE BLUFF COMMERCIAL
Online Archives

Pine Bluff Commercial archives

June 5, 2000

NEW BILL COULD HAVE PB ARSENAL BURNING OLD WARFARE MATERIAL

By Jennifer Baker/OF THE COMMERCIAL STAFF

The Pine Bluff Chemical Disposal Facility may have to incinerate miscellaneous chemical warfare materiel due to a recent bill passed by Congress.

The bill is initiating a study of the feasibility of incinerating nonstockpile materiels.

Nonstockpile materiels are any chemical warfare that is not a part of one of the nation's eight stockpiles, one of which is located at the Pine Bluff Arsenal.

The United States produced chemical warfare agents from 1917 until 1968 for use in World War I and later to deter other countries from using chemical weapons against U.S. or allied forces. There are many types of these chemical agents either stored in bulk containers or loaded in munitions. Some of these materiels are stored at the nation's stockpiles, others are not.

Five categories of chemical warfare materiel are going to be involved in this study passed by Congress, binary chemical weapons, former production facilities, miscellaneous chemical warfare material, recovered chemical warfare materiel and buried chemical warfare materiel.

When the U.S. signed and ratified the initial Chemical Weapons Convention, an international treaty that required the destruction of chemical weapons and chemical weapons production facilities, the eight Army chemical demilaritization facilities were given until 2007 to have all of the weapons destroyed. The Pine Bluff Arsenal chose incineration as its method of destruction.

As far as the nonstockpile materiels are concerned, the Pine Bluff Arsenal

and Tooele, Utah, are the only two facilities with permits to store nonstockpile materiels. Jeff Lindblad, spokesman for the Pine Bluff Chemical Disposal Facility, said these nonstockpile materiels include various things like tanks and guns as well as chemical munitions. "They are different materiels with some type of chemical in them, but because there may be a small amount of mustard or other agents in there they must be treated as a chemical agents," he said.

Officials say some of these agents, even in small doses could possibly cause breathing problems, eye irritation, vomiting and the inhibition of nerve conduction.

Regarding the international treaty stating all chemical warfare must be destroyed, Lindblad said the nonstockpile materiels do fall in that category although how they are disposed of is not specified. "These nonstockpile materiels that people are finding have to be treated with kid gloves - the systems in the facility we are constructing cannot handle these type of materiels."

Concerning what will happen to the nonstockpile weapons not in storage depends upon the Army, Lindblad said. "When a suspected warfare materiel is found the Army has to decide where to send it." Currently there is a a rapid response system that is transportable and is supposed to have the capability to safely handle, identify and decontaminate chemical warfare agents, but according to Lindblad this system is still being developed and studied.

"I'd be concerned if we, the Pine Bluff Chemical Disposal Facility, had to run a system to destroy these types of weapons - but if Congress says we're going to do it, then that's what we're going to do," Lindblad said. Several unsuccessful attempts were made to reach Congressman Jay Dickey Friday afternoon.

There are 38 states suspected of having buried chemical warfare materiel, including Arkansas.

PINE BLUFF COMMERCIAL
Online Archives

Pine Bluff Commercial archives

June 6, 2000

NONSTOCKPILES

THEY DON'T NEED TO BE MOVED TO THE ARSENAL

recent action by Congress directing a study on the feasibility of incinerating nonstockpiled chemical weaponry at the Pine Bluff Chemical Disposal Facility may sound reasonable to some, but not from where we sit. The Arsenal didn't ask for it and the nation probably won't need it.

From a big-picture perspective one might understand why the federal government would want to take advantage of the half billion dollar incinerator currently under construction at the Pine Bluff Arsenal. There are, after all, a lot of dangerous chemical weapons and munitions scattered around this nation, and we've got to do something to get rid of them. The health and safety of our citizenry, as well as the terms of an international treaty to destroy such weaponry, depend on it.

But the devil is in the details. A careful look at the impact this would have raises some legitimate questions. It's about as practical as burying our heads in some chemically contaminated sand.

The problem authorities are facing, obviously, is what to do with the disposal of chemical weaponry that is not stockpiled at eight sites around the nation, including the Pine Bluff Arsenal. These chemicals, of course, must be destroyed as must the stockpiles. Some of these hazardous materials date as far back as World War I and are as volatile as they are dangerous, which poses problems with both storing and transporting them.

The Pine Bluff Arsenal is one of only two sites in the nation (the other is at Tooele, Utah) with a permit to store nonstockpiled weapons, though that doesn't mean the facilities are in place to do so. According to incinerator spokesman Jeff Lindblad, the incinerator now being constructed is not equipped to handle much of the materiels now being uncovered elsewhere around the nation. "These nonstockpile materiels that (Army personnel) are finding have to be treated with kid gloves," he said last week. "The systems in

the facility we are constructing cannot handle these types of materiels."

What's more, moving these chemicals is a frightening thought in and of itself, and not just for Southeast Arkansas. According to the Army, there are 38 states suspected of having these chemicals buried, so moving them to Arkansas or Utah means transporting, albeit very carefully, in every direction through virtually every state in the contiguous U.S.

Right now the Army is developing a transportable "rapid response system" to go to a site and decontaminate uncovered chemicals on the spot. It's in the testing stage right now and appears far more practical then hauling these chemicals - whether by land or air - across the country.

Instead of the study Congress is now directing, let the federal government step up efforts to develop such a transportable system. It may well be the safest way to go.

Another election day

esidents of the 4th Ward in Pine Bluff are again being called to service, this time to decide a runoff election today between Michael Johnson and Billy Freeman to fill a City Council vacancy. A low turnout is expected; a strong turnout is desired.

This race began about three months ago following Levert Blunt's resignation after a decade on the council. Seven people jumped into the special election race and, three weeks ago, that field was narrowed to the two we now have. Fourth Ward residents can be grateful for the interest in serving them in this important position, and what better way to show that appreciation than by casting a ballot in today's election.

Polls are open from 7:30 a.m. to 7:30 p.m. today. Please do your duty.

June 8, 2000

U.S. Army Program Manager
for Chemical Demilitarization (PMCD)
Building E4585, ATTN: SFAE-CD-P
Aberdeen Proving Ground, MD 21010-4005

Sirs:

In response to your June 1, 2000 letter regarding the use of stockpile activities to dispose of non-stockpile materials at the Pine Bluff Chemical Agent Destruction Facility, I offer the following commerits.

1. I wholeheartedly endorse the House position that these facilities should be seriously studied for this use. As a taxpayer, I have supported the escalating cost of the stockpile program because of its emphasis on environmental protection and people safety. I believe the U.S. Army has done a superior job in developing a destruction system that is both safe and efficient. However, I do not support the destruction of these plants at the end of the stockpile mission and the expenditure of an additional $10-14 billion to construct separate destruction facilities for non-stockpile munitions. This very clearly is a waste of taxpayer dollars that already are in short supply.

2. I understand that the use of stockpile facilities for non-stockpile munitions will probably become an emotional public issue, as did the use of incineration technology in the stockpile program. However, I am also aware that existing proven technologies are available on the world market to support the safe destruction of non-stockpile materials. I also firmly believe that the retrofit of the existing stockpile facilities to receive the additional destruction equipment required for non-stockpile material will be a fraction of the cost of building new facilities. Again, preserving precious tax resources.

3. In summary, I'm confident that the Army studies will show this multi-use option to be feasible and extremely cost effective. I strongly support this option and encourage the U.S. Army to stay the course in the face of what I'm sure will become an emotional issue.

Sincerely,

A.E. Burns
1900 Andy Cove
White Hall, AR 71602

PINE BLUFF COMMERCIAL
Online Archives

Pine Bluff Commercial archives

June 9, 2000

State's delegation concerned by plan to burn chemicals

By Jennifer Baker/OF THE COMMERCIAL STAFF

With the exception of the Arkansas member of the House Armed Services Committee, other members of the state's Washington delegation were unaware of the committee's decision to direct the Army to conduct a feasibility study of the destruction of nonstockpile chemical materiels.

It was announced on June 1 the House Armed Services Committee, of which U.S. Rep. Vic Snyder is a member, had added to the Defense Authorization Bill of 2001 , ". . . based on independent assessments of costs and schedule, serious consideration should be given to the destruction of nonstockpile chemical materiel in chemical stockpile disposal facilities."

If the study proves feasible, then Congress will decide whether or not to pursue the destruction of these chemical materiels.

Although Snyder was aware of the order given to the Army, he said he had not received any public feedback until contacted by The Commercial Friday.

Nonstockpile materiels consist of any chemical weapons not a part of one of the nation's eight stockpiles, one of which is located at the Pine Bluff Arsenal. The other with the capability to destroy is at Toele, Utah.

"All this language has done has removed the prohibition from the Defense Authorization Bill, in reference to the nonstockpile materiels. I don't know what the answer is, but I am confident the Army will find a safe one," Snyder said.

According to Jeff Lindblad, a spokesman for the Pine Bluff Chemical Disposal Facility, the problem with destroying the nonstockpile materiels is "they are different types of materiels with some type of chemical in them, but because there may be a small amount of material in them they must be treated as chemical agents."

One member of the Arkansas delegation not familiar with the recent order to conduct the feasibility study is Sen. Blanche Lincoln. "I am not a whole lot familiar with what the House Committee has done, although I support the efforts of the committee's findings so we can better determine what the needs are to destroy these chemical materiels," she said.

Sen. Tim Hutchinson, a member of the Senate Armed Forces Committee, was unable to be reached.

Rep. Jay Dickey, in whose district the Pine Bluff Arsenal is located, as of June 1, had not heard of the House Armed Services Committee directive. But on Friday, Dickey voiced concern about destroying the chemicals at the current stockpile at the Arsenal.

"We shouldn't even consider any other weapons knowing that our current Pine Bluff Arsenal stockpile hasn't been destroyed. Every day that we let it sit there is more of a threat to our community," Dickey said.

Lindblad said he is not sure, due to the configurations of the older nonstockpile materiels, that they can be safely incinerated.

Dickey said, "I have serious concerns about bringing in chemical weapons from other places in our country. Although these weapons need to be destroyed, they do not need to be hauled into the state of Arkansas to attain this goal - our goal is to destroy what exists at the Arsenal, nothing more."

ADEQ
ARKANSAS
Department of Environmental Quality

June 29, 2000

James L. Bacon
U.S. Army Program Manager for Chemical Demilitarization
Building E4585, ATTN: SFAE-CD
Aberdeen Proving Ground, MD 21010-4005

Dear Mr. Bacon:

In response to your letter dated June 1, 2000, which notified me of your plans to study the feasibility of destroying non-stockpile material in the chemical stockpile disposal facilities, I would like to offer the following feedback.

First, this agency supports the Army's current non-stockpile program at the Pine Bluff Arsenal. Second, we discourage Congress from pursuing further study of disposal options using the chem demil facilities due to cost, technical, as well as, public credibility factors.

Significant modifications to the chem demil plant and environmental documentation would be required to accommodate the arsenal's unique non-stockpile inventory. In view of the tremendous operating expense of the chem demil facility, we believe the proposed economic feasibility study would clearly be a waste of federal money. It is our considered opinion that currently planned treatment and disposal of the stockpile materials should be followed and that the Pine Bluff Arsenal should not be considered for further study.

Since inception of the chem demil program, the public has been assured by Congress that the chem demil facilities will not be used for any purpose other than disposal of stockpile weapons. Specially, P.L. 99-145 SEC. 1412(c)(2) established this prohibition and P.L. 103-139, SEC 8075(b) further prohibited the use of appropriated funds for the study of "potential future uses". As stated in your letter, Congress has now rescinded this law. However, we believe our long-standing commitment to the Pine Bluff community and our representation to the community that the Congress is honor-bound to keep its commitment outweighs the imagined need to conduct a costly study of which the conclusion is already known.

This agency has established an open and productive relationship with the Pine Bluff Arsenal and surrounding community. As summarized in the attached editorial, we believe that the Army should continue with current non-stockpile plans in lieu of studying disposal options for the chem demil facility at Pine Bluff Arsenal.

Sincerely,

Randall Mathis

Randall Mathis
Director

cc: COL Chapman, Pine Bluff Arsenal

Editorial

Nonstockpiles

They don't need to be moved, much less to the Arsenal

A recent action by Congress directing a study on the feasibility of incinerating nonstockpiled chemical weaponry at the Pine Bluff Chemical Disposal Facility may sound reasonable to some, but not from where we sit. The Arsenal didn't ask for it and the nation probably won't need it.

From a big-picture perspective one might understand why the federal government would want to take advantage of the half billion dollar incinerator currently under construction at the Pine Bluff Arsenal. There are, after all, a lot of dangerous chemical weapons and munitions scattered around this nation, and we've got to do something to get rid of them. The health and safety of our citizenry, as well as the terms of an international treaty to destroy such weaponry, depend on it.

But the devil is in the details. A careful look at the impact this would have raises some legitimate questions. It's about as practical as burying our heads in some chemically contaminated sand.

The problem authorities are facing, obviously, is what to do with the disposal of chemical weaponry that is not stockpiled at eight sites around the nation, including the Pine Bluff Arsenal. These chemicals, of course, must be destroyed as must the stockpiles. Some of these hazardous materials date as far back as World War I and are as volatile as they are dangerous, which poses problems with both storing and transporting them.

The Pine Bluff Arsenal is one of only two sites in the nation (the other is at Tooele, Utah) with a permit to store nonstockpiled weapons, though that doesn't mean the facilities are in place to do so. According to incinerator spokesman Jeff Lindblad, the incinerator now being constructed is not equipped to handle much of the materiels now being uncovered elsewhere around the nation. "These nonstockpile materiels that (Army personnel) are finding have to be treated with kid gloves," he said last week. "The systems in the facility we are constructing cannot handle these types of materiels."

What's more, moving these chemicals is a frightening thought in and of itself, and not just for Southeast Arkansas. According to the Army, there are 38 states suspected of having these chemicals buried, so moving them to Arkansas or Utah means transporting, albeit very carefully, in every direction through virtually every state in the contiguous U.S.

Right now the Army is developing a transportable "rapid response system" to go to a site and decontaminate uncovered chemicals on the spot. It's in the testing stage right now and appears far more practical then hauling these chemicals — whether by land or air — across the country.

Instead of the study Congress is now directing, let the federal government step up efforts to develop such a transportable system. It may well be the safest way to go.

Economic Development
THE ALLIANCE
of Jefferson County, Arkansas

▲Greater Pine Bluff Chamber of Commerce ▲Jefferson County Industrial Foundation ▲Pine Bluff-Jefferson County Port Authority

FAX MEMORANDUM

To: Mr. James L. Bacon, PMCD
From: Derrill Pierce
Subject: Non-Stockpile Materials
Date: August 2, 2000
Copies: Jack McNulty, File

This is to clarify the position of The Alliance in relation to the disposal of non-stockpile munitions at the Pine Bluff Arsenal.

As a matter of practical necessity, The Alliance has supported the Army's non-stockpile program at the Pine Bluff Arsenal. We have consistently supported the post-mission use of all or a portion of the chemical demilitarization incinerator now under construction. In concert with other area interests, we will seek to develop economically viable alternative uses that will benefit the Arsenal, the community and our state.

But we do not endorse the use of the chemical demilitarization facility for the disposal of non-stockpile munitions. We believe that entirely separate facilities will be required, utilizing different technologies than those now being deployed. Further, as a matter of public safety, we believe that the non-stockpile disposal facilities should be developed at a greater distance from the campus of the FDA's Jefferson Laboratories, the proposed site of a DOD vaccine production facility, sites for academic facilities and private sector use within The Bioplex, and the adjacent residential population.

Please let me know if I may supply additional information, or be helpful in any way.

P.O. Box 5069, Pine Bluff AR 71611-5069 ▲ 510 Main Street, Pine Bluff AR 71601-4328
1-800-420-6179 (870) 535-0110 ▲ Fax (870) 535-1643 ▲ Website: http://pinebluff.dina.org

Pueblo Chemical Depot

PUEBLO DEPOT ACTIVITY DEVELOPMENT AUTHORITY

P.O. BOX 11467
PUEBLO, COLORADO 81001-0467
PHONE: (719) 583-6380 FAX: (719) 583-6115

June 8, 2000

U.S. Army Program Manager for Chemical Demilitarization (PMCD)
Building E4585, ATTN: SAFE-CD-P
Aberdeen Proving Ground, MD 21010-4005

Gentlemen:

House Report 106-616, to accompany H.R. 4205, the National Defense Authorization Bill for Fiscal Year 2001, raises many significant issues regarding the destruction of non-stockpile chemical materiel in stockpile disposal facilities. The Pueblo Chemical Depot is the proposed site for a stockpile disposal facility.

The Pueblo Chemical Depot is a chemical stockpile installation for storage and future destruction of HT and HD blister agent. The decision as to what technology will be used for destruction has not been made. The NEPA Assessment was commenced in April 2000. The Depot is also a Base Realignment and Closure Act (BRAC) installation, being directed for realignment by Congress pursuant to BRAC I (1988). The Report of the Defense Secretary's Commission on Base Realignment and Closure states that:

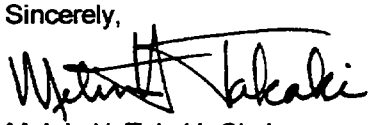
> "The Commission was prevented from closing Pueblo because of the ongoing chemical demilitarization mission."the installation should be realigned to the maximum extent possible in order to facilitate closure as soon as demilitarization is complete."

Since Congress' enactment of the BRAC in 1988, one constant policy of the Army has been the planned closure of the Depot after destruction of the stockpiled chemical weapons.

The Authority wishes to express its concern regarding the potential delay in closure of the Pueblo Chemical Depot. Whether the facility remains operational after disposal of the stockpile chemical weapons in order to dispose of non-stockpile materiel, or the facility disposes of stockpile and non-stockpile materiel blended together—either scenario has the potential to delay closure, transfer and environmental cleanup.

If you have any questions, please do not hesitate to contact me.

Sincerely,



Melvin H. Takaki, Chair
Board of Directors

MHT:pd
cc: Senator Wayne Allard
Senator Ben Nighthorse Campbell
Representative Diana DeGette
Representative Joel Hefley
Representative Scott McInnis
Representative Bob Schaffer
Representative Tom Tancredo
Representative Mark Udall
John Klomp, Chair, Board of County Commissioners, Pueblo County
Corinne Koehler, President, Pueblo City Council
Gloria Patton, Deputy Assistant Secretary of the Army Chemical Demilitarization
LTC John J. Megnia, Commander, Pueblo Chemical Depot
Adrian Nalcayama, Program Manager, Base Realignment and Closure Office

Umatilla Chemical Depot

NEWS RELEASE

For further information call
Umatilla Chemical Depot Public Affairs Office
(541) 564-5312/5418
or
Umatilla Chemical Disposal Outreach Office
(541) 564-9339

FOR IMMEDIATE RELEASE

Release # 27
Date: June 1, 2000
Release Time: 5 p.m.

Congress mandates study on using disposal facilities for 'non-stockpile'

ABERDEEN PROVING GROUND, Md. -- The U.S. Army Program Manager for Chemical Demilitarization is initiating a congressionally mandated study to assess the feasibility and desirability of destroying non-stockpile chemical materiel in its chemical stockpile disposal facilities, including the Umatilla Chemical Agent Disposal Facility.

The National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65) provides that non-stockpile materiel could be disposed in stockpile disposal facilities if the state in which the facility is located issues the appropriate permits. Previously, such disposal facilities could only be used to destroy stockpile materiel..

In comments the House Armed Services Committee provided to the House's Fiscal Year 2001 Defense Authorization Bill, the committee stated its belief that, based on independent assessments of costs and schedule risks in the program, conducted for the Army and the Department of Defense, serious consideration should be given to destroying non-stockpile chemical materiel in chemical stockpile disposal facilities.

At the direction of House Report 106-616, Mitretek Systems, a non-profit engineering firm, will conduct the feasibility and desirability study for the Army. However, before any federal action is contemplated, an environmental analysis would be conducted under the National Environmental Policy Act. The feasibility study will be conducted in two phases.

An Interim Report, due within 60 days, will examine each chemical agent disposal facility and determine whether non-stockpile materiel can be destroyed in the facility and whether it will produce a cost saving to the government. The report will also identify facilities where there is no advantage to using them to destroy non-stockpile materiel. In addition, the report will identify those sites where no immediate determination can be made as to whether the facility could destroy non-stockpile materiel. A Technical Report, due November 30, 2000, will address all issues that require further study and could not be resolved in the Interim Report.

(more)

The Program Manager for Chemical Demilitarization (PMCD) is charged by Congress with the safe destruction of the United States chemical agents and munitions like those stored at the Umatilla Chemical Depot.

PMCD is responsible for the destruction of chemical weapons and agents that are stored in eight sites in the continental U.S. and at Johnston Island (known as "stockpiles"), and is also responsible for the destruction of chemical agent and munitions that are recovered at sites around the country (known as "non-stockpile" chemical materiel).

PMCD currently operates chemical stockpile disposal facilities on Johnston Island and near Tooele, Utah, and has seven additional stockpile disposal facilities under construction or in the planning stages. The disposal facilities include the Umatilla Chemical Agent Disposal Facility near Hermiston, Ore., now under construction.

At Umatilla, the "non-stockpile" material under consideration involves five ton containers and 73 M56 warheads with agent GB or VX.

The ton containers hold nerve agents collected during the mid-1980s under the Drill and Transfer System program. The mobile unit drained and processed leaking chemical weapons stored at the Umatilla Chemical Depot, and placed the recovered agent in the depot's storage area known as K Block, where the "stockpile" chemical agents also are stored. Four of the containers hold agent GB, or Sarin; and one of the containers holds agent VX.

The warheads are part of a 1980s rocket assessment program. Six contain agent VX; 67 contain agent GB.

In comparison, the "stockpile" chemical agents scheduled for disposal at the Umatilla Chemical Agent Disposal Facility involve about 220,000 items, including land mines, projectiles, bombs, rockets, spray tanks and ton containers.

Comments on this action can be sent to: The U.S. Army Program Manager for Chemical Demilitarization, ATTN: SFAE-CD-P, Building E4585, Aberdeen Proving Ground, MD 21010-4005.

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Morrow County Courthouse, 100 Court St., Heppner, OR 97836

DATE: Thursday, June 22, 2000
CONTACT: Terry Tallman, Morrow County Judge
541-676-5624
FOR IMMEDIATE RELEASE

MORROW COUNTY COURT STANDS AGAINST NON-STOCKPILE BURN

Heppner, Ore. – Morrow County Commissioners stand against the incineration of non-stockpile materials and chemical munitions from outside the Army's Umatilla Chemical Depot.

The position of the Morrow County Court stems from recent comments by Congressman Bob Riley, R-Ashland, Alabama. Although Riley opposes any effort by the Army to burn non-stockpile weapons at the incinerator in Anniston, Alabama, he did approve legislation (the Defense Authorization Act) that came out of the House Armed Services Committee on which he serves, allowing non-stockpile weapons to be burned and transported across state lines.

Riley was reported in The Anniston Star saying he approved the legislation not for Anniston, but for incinerator communities like those in Tooele, Utah; Umatilla, Ore., and Pine Bluff, Ark., that are interested in extending the lives of their incinerators to burn non-stockpile weapons.

"We are opposed to incineration of any non-stockpile materials that are not already okayed by the Department of Environmental Quality's permit," said Morrow County Judge Terry Tallman.

Tallman continued, "We know the Army is investigating bringing in non-stockpile materials from places like Alaska and we want to issue a statement to our citizens now that we're opposed to letting it happen."

Morrow County Commissioners have entered into a dialogue with the Calhoun County Commission in Anniston, Alabama about the incineration of non-stockpile materials and other related stockpile matters.

"We're involved on similar projects and deal with similar issues," stated Tallman. "It only makes sense to try and learn from each other."

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Hermiston East Oregonian
Page 6A
Saturday, June 24, 2000

Morrow officials oppose burning non-stockpile items

■ Concern may be moot; DEQ says it won't happen

By CRAIG SCOTT
of the East Oregonian

Following comments from an Alabama congressman, the Morrow County Court has declared its opposition to burning non-stockpile weapons from other states at the Umatilla Chemical Depot's incinerator plant.

Morrow County's opposition is voiced by Judge Terry Tallman, who said the court is reiterating its position because Rep. Bob Riley, R-Ala., told an Alabama newspaper that Oregon supports burning non-stockpile materiels. "Materiel" refers to military weapons and associated tools.

According to Tallman, Riley recently approved legislation to let non-stockpile items be transported across state lines to be destroyed even though he opposes such actions in his home state, where a chemical weapons incinerator is being constructed.

"One of the things he had said is we are in favor of keeping our incinerator running past the dates of incineration ... and that we wanted to burn non-stockpile materiel and that is not the case at all," Tallman said on Thursday.

Non-stockpile materiels include weapons that have been buried and uncovered, and items from former chemical weapons production sites. Much of it was used for training military for the first World War. Such weapons are believed to be buried in 38 states and U.S. territories.

Only five-ton containers and 73 warheads are included in Oregon's non-stockpile, all of which are stored at the depot. The warheads and containers are permitted to be destroyed in Umatilla. Morrow County's opposition is toward such items from coming in from other states.

Tallman's concerns may not be an issue: Oregon has repeatedly declared its opposition to allowing such weapons to enter the state.

"Any chemical-agent-related materiel is not going to cross over the state line," said Trisha Kirk, the permit coordinator for the Oregon Department of Environmental Quality.

Lt. Col. Christopher Ross, the Army's program manager for non-stockpile materiel, backed up Kirk's assertion on Friday.

"The Army has no plans of bringing in non-stockpile systems to Oregon," Ross said.

And even if a congressional study finds benefits for destroying non-stockpile materiels in regional incinerators, the states with the incinerators still have the final say, Ross explained. Hypothetically, if VX rockets were found in Washington, the state would have to petition Oregon to accept the items for disposal.

If the materiels needed to be transported through a third state to reach the incinerator, the Army would need to notify each state of which roads would be used to transport the items. Permission by the third state isn't needed, Ross said, because such transportation is already OK'd by federal law.

Congress mandated a study last fall looking at whether the nation's nine incinerator sites can be used for destroying materiel that's not part of nation's original chemical weapon stockpiles. Doing so could save money and help keep the nation on schedule with the Chemical Weapons Convention, an international treaty that lays out a schedule for destroying chemical weapons.

A separate program to destroy the non-stockpile items is under way, which would likely mean mobile units traveling to areas to dispose of the materiel. Only sites in Utah and Arkansas are permitted for the emergency disposal of non-stockpile weapons and tools.

Craig Scott can be reached at 1-800-522-0255 (ext. 1-303 after hours) or e-mail: craig@eastoregonian.com.

Appendix B

Program Manager for Chemical Demilitarization Legislative Overview Fact Sheet

PMCD
Program Manager for Chemical Demilitarization

fact sheet

Legislative Overview

The following overview summarizes legislative actions taken by Congress that directly impact the Army's Chemical Stockpile Disposal Project:

Public Law 99-145
National Defense Authorization Act for Fiscal Year 1986

- Designates the U.S. Army as the organization responsible for the safe destruction of the U.S. chemical weapons stockpile.
- Prohibits the future use of chemical disposal facilities for any purpose other than the disposal of chemical weapons and dictates dismantling of the facilities once the stockpile is eliminated.

Public Law 100-456
National Defense Authorization Act for Fiscal Year 1988

- Establishes the chemical stockpile destruction deadline of September 30, 1994.
- Designates a general officer as the Director of the Chemical Demilitarization Program.

Public Law 102-484
National Defense Authorization Act for Fiscal Year 1993

- Creates the Chemical Demilitarization Citizens' Advisory Commissions.
- Requires the U.S. Army to submit a report comparing incineration with alternative technologies.
- Requires the U.S. Army use an alternative technology at low-volume sites, provided it is significantly safer, equally or more cost-effective, and can meet the destruction deadline.
- Defines low-volume sites as those with 5% or less of the total chemical weapons stockpile.
- Amends the destruction deadline to December 31, 2004.

Public Law 103-160
National Defense Authorization Act for Fiscal Year 1994

- Allows Citizens' Advisory Commissions to comment on the U.S. Army's report on alternative technologies.
- Suspends funding for the construction of a new chemical weapons disposal facility at Anniston Army Depot, Alabama until:
  1. The Johnston Atoll Chemical Agent Disposal facility operates successfully and within the environmental limits for at least six months; and
  2. The U.S. Army schedules the award of a construction contract for another site within 12 months of awarding a contract at Anniston Army Depot.

Public Law 103-337
National Defense Authorization Act for Fiscal Year 1995

- Prohibits the transportation of chemical stockpile munitions across state lines.

Public Law 104-106
National Defense Authorization Act for Fiscal Year 1996

- Requires the Army to submit a report on potential and recommended programmatic cost reduction measures.
- Requires the Army to submit a report with recommendations on base closure and reuse issues affecting stockpile communities.
- Requires the U.S. Army to use an alternative technology at low-volume sites provided it is significantly safer, cost-effective, and can meet the destruction deadline.
- Provides for Citizens' Advisory Commission travel reimbursement.
- Permits appointing a civilian as the Director of the Chemical Demilitarization Program

For more information, contact the Public Outreach and Information Office of the Program Manager for Chemical Demilitarization at 1 • 800 • 488 • 0648.

PMCD
Program Manager for Chemical Demilitarization

Public Law 104-201
National Defense Authorization Act for Fiscal Year 1997

- Requires the assessment of alternative technologies for the disposal of assembled chemical munitions. A report on the findings is to be submitted to Congress no later than December 31, 1997.
- Allocates $25 million for an alternative technology pilot program should the Secretary of Defense decide to continue the development of an alternative disposal technology.
- Requires that the pilot program be conducted at sites where alternative technology is recommended.

Public Law 104-208
National Defense Appropriations Act for Fiscal Year 1997

- Repeats Fiscal Year 1997 Defense Authorization language regarding the alternative technology pilot program.
- Allocates $40 million to conduct a pilot program to identify and develop disposal alternatives for sites containing assembled chemical munitions.
- Requires the designation of a program manager for the pilot program that is not associated with the current Chemical Stockpile Disposal Project.
- Suspends funding for the Blue Grass and Pueblo disposal facilities until 180 days after the final report on the pilot program has been submitted to Congress.
- Prohibits the use of funds to study the transportation of unitary chemical weapons or neutralized chemical agent to any of the eight stockpile sites.

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Glossary

ABCDF	Aberdeen Chemical Agent Disposal Facility
ADEQ	Arkansas Department of Environmental Quality
ADEM	Alabama Department of Environmental Management
ANAD	Anniston Army Depot
ANCDF	Anniston Chemical Agent Disposal Facility
APG	Aberdeen Proving Ground
BCHS	Bulk container handling system
BGAD	Blue Grass Army Depot
BGCDF	Blue Grass Chemical Agent Disposal Facility
CAC	Citizens' Advisory Commission
CAIS	Chemical agent identification set
CAMDS	Chemical Agent Munitions Disposal System
CDF	Chemical agent disposal facility
CG	Phosgene
CHATS	Chemical agent transfer system
CK	Cyanogen chloride
CN	Chloroacetophenone
CTF	Chemical Transfer Facility
CWC	Chemical Weapons Convention
CWM	Chemical warfare materiel
DCD	Deseret Chemical Depot
DF	Binary agent precursor
DFS	Deactivation furnace system
DM	Adamsite
DOT	U.S. Department of Transportation
DPG	Dugway Proving Ground
ECR	Explosive containment room
FAIR	Families Against Incinerator Risk
GA	Tabun (nerve agent)
GB	Sarin (nerve agent)
GD	Soman (nerve agent)
GS	Ethyl malonate (GA simulant)
H	Levinstein mustard (blister agent)
HD	Distilled mustard (blister agent)
HN	Nitrogen mustard (blister agent)
HS	Sulfur mustard (blister agent)
HT	Mustard-T mixture (blister agent)
HVAC	Heating, ventilation, and air conditioning
JACADS	Johnston Atoll Chemical Agent Disposal System

L	Lewisite
LIC	Liquid incinerator
MAPS	Munitions assessment and processing system
MPF	Metal parts furnace
NECD	Newport Chemical Depot
NECDF	Newport Chemical Agent Disposal Facility
NSCM	Non-stockpile chemical materiel
OC	Outreach Coordinator
PAO	Public Affairs Officer
PBA	Pine Bluff Arsenal
PBCDF	Pine Bluff Chemical Agent Disposal Facility
PDTDF	Prototype detonation and destruction facility
PHS	Projectile handling system
PMATA	Project Manager for Alternative Technologies and Approaches
PMCD	Program Manager for Chemical Demilitarization
PMCSD	Project Manager for Chemical Stockpile Disposal
PMNSCM	Product Manager for Non-Stockpile Chemical Materiel
PS	Chloropicrin
PUCD	Pueblo Chemical Depot
PUCDF	Pueblo Chemical Agent Disposal Facility
QL	Binary agent precursor
R&D	Research and development
RCRA	Resource Conservation and Recovery Act
RD&D	Research, development, and demonstration
RRS	Rapid Response System
RSM	Rocket shear machine
SCWO	Supercritical water oxidation
SOP	Standing operating procedure
TBD	To be determined
TC	Ton container
TOCDF	Tooele Chemical Agent Disposal Facility
TP	Triphosgene
UMCD	Umatilla Chemical Depot
UMCDF	Umatilla Chemical Agent Disposal Facility
USC	U.S. Code
VX	Nerve agent

The material contained in this document is for internal coordination only and may not be released outside the Federal government until coordination has been completed and the material has been cleared for public release by the appropriate authority.

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
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REPLY TO
ATTENTION OF

SAAL-ZC

13 SEP 2000

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Forwarding of Mitretek Systems Report Titled, "Assessment of Using Stockpile Disposal Facilities to Process Selected Non-Stockpile Chemical Materiel – Initial Screening", August 2000

Recent Congressional Legislation, Public Law 106-65, has modified previous prohibitions on the use of chemical stockpile disposal facilities for other purposes. The Army contracted for an independent assessment to examine the feasibility of using the stockpile facilities to destroy non-stockpile materiel. Mitretek Systems is performing this assessment in two parts. The enclosed Initial Screening Report is being distributed now, and the final Comprehensive Report will be distributed when completed by the end of calendar year 2000.

Questions regarding this initial report can be forwarded to Ms. Louis Dyson at 1-800-488-0648.

Paul J. Hoeper
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)

Enclosure

For Immediate Release
September 18, 2000

For more information contact:
(800) 488-0648

U.S. Army Makes Available Independent Screening Analysis Prepared by Mitretek Systems

ABERDEEN PROVING GROUND, Md. – The U. S. Army is making available Stage 1 of a two-stage technical report, *Assessment of Using Stockpile Facilities to Process Selected Non-Stockpile Chemical Materiel: Initial Screening.* The Stage 1 screening analysis, prepared by Mitretek Systems of McLean, Va., examines each of the eight chemical agent disposal facilities (CDFs) in the United States to determine whether these facilities can safely destroy non-stockpile chemical materiel (NSCM) currently located at the stockpile sites. The Stage 1 report also identifies where there is no advantage to using the chemical demilitarization facilities for the purpose of destroying certain non-stockpile materiel. In addition, the report identifies those CDFs where it cannot be immediately determined whether the facility could destroy non-stockpile materiel. Transportation and destruction of NSCM from other sites to the stockpile sites is not considered in the report.

This two-stage technical report responds to congressional direction to the Department of Defense to conduct an independent assessment of cost and schedule on the use of stockpile facilities for the destruction of NSCM.

The Stage 1 report is an initial screening of a two-phase report. The follow-on Stage 2 report will address issues that require further examination and could not be resolved in the initial screening report, including cost data. This Stage 2 report is due to be released later this year.

It is emphasized that the report is only a feasibility study, and only addresses NSCM items currently in storage. Citizens can review the report and provide input to the Army on its initial findings. The report documents will be available for viewing at each PMCD Chemical Stockpile Outreach Office and on the PMCD Web site (http://www-pmcd.apgea.army.mil/). For further information or a copy, you may contact (410) 436-3629 or (800) 488-0648.

Public input received prior to October 31, 2000 will be included in the Stage 2 detailed assessment report. Public input on this action can be sent to: The U.S. Army Program Manager for Chemical Demilitarization, ATTN: SFAE-CD-P, Building E4585, Aberdeen Proving Ground, MD 21010-4005 or submitted through a comment form on the PMCD Web site at http://www-pmcd.apgea.army.mil.

-End-